Safety Data Sheets

FRS SDS Reference Library

Employee access training, product index and complete source packets.

QUICK ACCESS

Employee access training

Contents and product index

Original filename index

File identity review notes

SCAN FOR FRS SDS ACCESS

gofleetrepair.com/safety-training

COMPILED OCTOBER 23, 2026

Original source packets are retained with the product and filename indexes.
Different document versions and component sheets remain available.

Employee access quick start

For all current employees and new hires. Use the published FRS library through either route below. The first-page QR code opens the FRS website entry page.

FRS website	Paylocity
1. Scan the first-page QR code, or open gofleetrepair.com/safety-training 2. Select Safety Data Sheets (SDS). 3. Open the FRS SDS Reference Library.	1. Sign in to Paylocity and open Home. 2. Open Resources. 3. Select FRS Safety Data Sheets (SDS) and open the library.

Find the correct product

Open the contents or bookmarks, then select the product name. You can also search a product name or code. Match the SDS product identifier, manufacturer and formulation to the container; similar names may refer to different products.

On a phone

Tap the PDF viewer's search or bookmarks control. If your browser does not show these controls, open the downloaded file in a PDF viewer. Save a website bookmark or home-screen shortcut so you can return quickly.

On a computer

Use the clickable contents, or press Ctrl+F on Windows / Command+F on Mac. Search again to move through matches. The original filename index also works with codes such as CRC05089.

If access fails

Use your location's or mobile crew's designated emergency backup, as demonstrated during training. Notify your supervisor if the website, Paylocity, PDF or backup cannot be opened. Follow FRS's emergency response procedure for an active incident; do not delay response while trying to sign in.

Before this training is issued: FRS must publish and verify both access routes and establish the backup method. See the supervisor rollout page.

How to find an SDS

1. Match the product

Use the product name, manufacturer and product code on the container. Several products have similar names or more than one document version.

2. Use the contents or bookmarks

Select a product name in the contents, or open your PDF viewer's bookmarks. A bookmark opens the SDS directly when a supplier letter or product data sheet appears first.

3. Search the packet

On a computer, press Ctrl+F (Windows) or Command+F (Mac). On a phone, use the PDF viewer's search icon. Search a distinctive product name or code; search again to move through matches.

4. Use the master page numbers

The contents and filename index use the running "Library page" numbers printed in the added bottom strip. Supplier page numbering remains inside each original sheet.

5. Check a complete packet

Some packets include cover letters, product sheets, addenda or multiple component SDSs. All pages of each unique source PDF remain together and in their original order.

6. Keep access available

Follow FRS's trained access procedure and designated emergency backup procedure if the online copy cannot be opened.

About this compilation

This is a reference library assembled from the supplied documents. It is not a current chemical inventory and does not confirm which products are in stock. Supplier document dates and content are retained as supplied; current manufacturer revisions have not been independently verified.

Scanned or poorly encoded pages have an invisible text-recognition layer where needed. Search text may contain recognition errors; read the visible supplier sheet for the original wording.

Supervisor training & rollout

Use this procedure for existing employees and as part of new-hire orientation. This is SDS access instruction; complete the separate chemical hazard training required for the employee's work.

Set up access before employee release

Website: publish and verify the SDS library at gofleetrepair.com/safety-training.
The cover QR code points to this page.

Paylocity: publish or link the library under Home > Resources > FRS Safety Data Sheets (SDS), with access for all current employees and future hires.

Test: open both routes as a regular employee on a phone and a company device; check the PDF opens, searches, downloads and prints.

Emergency backups: setup is still required

At preparation, FRS reported that emergency backups were not set up yet. Before rollout, designate accessible shop backups for every shift and a backup for mobile crews. A practical option is an indexed paper binder for each shop and relevant paper copies or a verified offline PDF for each mobile crew. Show employees the exact location and test retrieval with internet access unavailable.

Run a short hands-on demonstration

Show: open the library using the website QR code and Paylocity.

Find: choose a product actually used in the employee's work area and match its container identifier to the correct sheet.

Navigate: demonstrate the contents, bookmarks, search and Library page numbers. Show component bookmarks where applicable.

Practice: have the employee repeat the task without prompting and demonstrate access to the actual emergency backup.

Record: complete the training record on the next page after the employee demonstrates both primary and backup access.

Maintain the process

Train current employees on every shift, include this exercise in future-hire orientation, and refresh access instruction when the location or method changes. Assign a safety owner to maintain the source library, website/Paylocity links and backup copies together. Recheck new products and revised supplier sheets before updating the master packet.

SDS access training record

Complete after the employee demonstrates access. Use one record per employee; retain it with the company's training records.

Employee name: _____

Work location / mobile crew: _____

Job / work area: _____

Trainer name: _____

Training date: _____

Training type (current employee / new hire / refresher):

_____

Demonstration checklist

[ ] Opened the FRS library from the website or first-page QR code.

[ ] Opened the FRS library from Paylocity Resources.

[ ] Matched a product used at work to the correct SDS product identifier.

[ ] Used the contents, bookmarks or search without prompting.

[ ] Located the actual shop or mobile emergency backup and demonstrated retrieval.

Backup location / offline device and file

_____

_____

Any access issue found / corrective action

_____

_____

Employee signature: _____ Date: _____

Trainer signature: _____ Date: _____

Do not mark training complete while primary or backup access remains unavailable. This record documents access instruction, not completion of all chemical hazard training.

File identity review notes

These entries are indexed by the product identified inside the PDF. Confirm the intended product against the actual container before relying on a source filename.

Original file	What the supplied document identifies
DOW12031375.pdf	S028 - library pp. 254-259 The document identifies Disposable Polybag from The Scensible Source Co.; the filename begins with DOW.
LUC10827.pdf	S076 - library pp. 830-841 The document identifies Synthetic SAE 50 WT Motorcycle Oil and part number 10765. Confirm the intended Lucas product.
RADM720.pdf	S115 - library pp. 1186-1195 The document identifies Quali-Pro Chlorothalonil 720 SFT, an ADAMA pesticide product. Confirm that this is the product intended for this file.
SIK106094.pdf	S110 - library pp. 1152-1158 The document identifies an R&D Systems / Bio-Techne research reagent, AF1094N (Phospho-MSK1/MSK2 Alexa Fluor 700 PAb). It is not identified as a Sika sealant in the supplied PDF.

Versions, duplicate files and packet contents

18 exact duplicate copies were consolidated without removing unique source pages. The filename index maps every supplied file to its retained packet. Different dated versions are kept separately; compare the container and document identifiers before selecting a version.

The NSPA connector packet includes a supplier letter plus the Alpha alloy SDS. The Tensorgrip S101 AA packet includes product information plus the SDS. The 5 Minute Epoxy and Handi-Foam packets include separate component sheets and direct component bookmarks.

Older MSDS documents, including the supplied Seal-Gap roof sealer and Multi Purpose Lithium Grease sheets, remain in the library as supplied.

Contents & product index

Alphabetical by the product identified inside each retained packet. Select a title to open it. Page ranges cover the complete packet.

Doc.	Product / document	Library pages
S001	2ZXE3 B/Screen NO PDCB H/STAMP Grainger Green Apple (ETACP115)	19-27
S002	3M Hi-Strength Spray Adhesive 90 (Aerosol)	28-41
S003	3M Scotch-Brite Bristle Discs, Radial Bristle Discs / Brushes and Roloc Body Man's Bristle Disc	42-50
S004	3M Scotch-Brite Surface Conditioning AMED Sheets, Hookit Rolls, Discs and Belts	51-61
S005	AA PTFE Thread Seal Tape	62-66
S006	ACRYSOL RM-7 Rheology Modifier	67-79
S007	ARC No Lap Bands - Coated & Nonwoven	80-83
S008	ARC Quick-Lok Discs - Coated & Nonwoven	84-87
S009	Aurora / Propar PNT13-22 Gloss White (AT00130022)	88-92
S010	Aurora / Propar PNT3-1 Gloss Black (AT00030001)	93-97
S011	Auto Choice Spray Paint - Gold (PMSPG)	98-110
S012	Badger Multi-Purpose ABC Dry Chemical Fire Extinguisher	111-119
S013	Bell & Gossett Lubricating Oil - Hydraulic Oil AW ISO 68	120-129
S014	Blaster Air Tool Lubricant (16-ATL / 128-ATL / 5-ATL / 55-ATL)	130-134
S015	Blaster Brake Cleaner (20-BC / 20-BC-CND)	135-140
S016	Carb Medic Carburetor Cleaner (M4814 / M4824)	141-152
S017	Chevron Way Lubricant 32, 68, 220	153-160
S018	Coated Finished Flap Discs (UPC 66261119269)	161-169
S019	CRC All Purpose Enamel Gloss White Spray Paint (18006)	170-180
S020	CRC Battery Cleaner with Acid Indicator - 11 oz (05023)	181-188
S021	CRC Brakleen Brake Parts Cleaner (05089) - 2017 Revision	189-197
S022	CRC Brakleen Brake Parts Cleaner - 19 oz (05089) - 2020 Revision	198-206
S023	CRC Instant Cold Galvanize (05048)	207-217
S024	CRC QD Electronic Cleaner - 11 oz (05103)	218-226
S025	CRC Technician Grade Dielectric Grease - 3.3 oz (05113)	227-234

Doc.	Product / document	Library pages
S026	Delo Syn-Trans XE SAE 75W-90	235-243
S027	Diesel Exhaust Fluid - Imperial Oil (SDS 20459)	244-253
S028	Disposable Polybag - The Scensible Source Co.	254-259
S029	DOWSIL 3 Additive	260-277
S030	DOWSIL Allguard Silicone Elastomeric Coating Pastel Tint Base	278-295
S031	Ecolab Heavy Duty Degreaser (919211)	296-305
S032	Ecolab Instrument Lubricant (903295-05)	306-315
S033	Eyesaline Eyewash or Sterile Eyesaline	316-321
S034	Final Charge Global 50/50 Prediluted Antifreeze and Coolant	322-330
S035	Flame-Retardant Heat-Shrink Tubing - ShenZhen Woer	331-338
S036	FORTRESS Spray Disinfectant Deodorant (2004)	339-344
S037	FPPF Polar Power Diesel Fuel Treatment	345-357
S038	Froth-Pak 120REF 1.75 HFC Insulating Foam Sealant	358-373
S039	Froth-Pak 17gal REF 1.75 HFO POLY Spray Foam Sealant	374-398
S040	Froth-Pak 27gal REF 1.75 HFO POLY Spray Foam Sealant	399-425
S041	Froth-Pak AF 120gal REF HFC ISO Spray Foam Sealant	426-441
S042	Froth-Pak AF 27gal REF HFO ISO SLNT Foam Sealant	442-461
S043	Froth-Pak ISO INT AF HFC	462-476
S044	Froth-Pak POLYOL HFO 650BF Cylinder	477-502
S045	Gear Oil GL-1 SAE 90, 140	503-512
S046	Gloss Black High Solid - 16 oz (IS085001-0)	513-527
S047	Gloss White (085002-0)	528-537
S048	GREAT STUFF Gaps & Cracks Insulating Foam Sealant - 12 oz HC ES	538-556
S049	Handi-Foam Low Pressure Polyurethane Foam - A-Side and B-Side Components (134a) Includes both component SDSs; use the component bookmarks.	557-571
S050	Handi-Foam Low Pressure Polyurethane Foam Sealants (HC) - A16186	572-578
S051	Havoline LS Gear Lubricant SAE 80W-90	579-587
S052	HDX Double Coverage Paint + Primer Spray Paint - Flat Black (1682297)	588-602

Doc.	Product / document	Library pages
S053	Hobart Electrodes, Aluminum 4043 (H722830-RDP / H722844-RDP)	603-610
S054	Hobart Shielded Metal Arc Welding (SMAW) Electrodes - SDS 415884	611-614
S055	Imperial 6536 Degreaser and Brake Parts Cleaner III	615-625
S056	Imperial 6540 Heavy Duty Glass Cleaner	626-635
S057	Imperial A/C Coil Cleaner (6511-0)	636-640
S058	Imperial Penetrating Oil	641-656
S059	Imperial PL 9623 Covered Electrode for Shielded Metal Arc Welding	657-665
S060	Johnsen's DOT 4 Brake Fluid - 32 fl oz (5032)	666-676
S061	KEX All Purpose Cement (KX-511F / KX-512F)	677-687
S062	KEY FP100A Crack Filler - Part A	688-697
S063	KEY FP100B Crack Filler - Part B	698-707
S064	KEY QP300A Quick Patch - Part A	708-716
S065	KEY QP300B Quick Patch - Part B	717-726
S066	Krylon Industrial WORK DAY Enamel Spray Paint - Gray Primer (A04418007)	727-746
S067	Lawson Gloss Black High Solids Paint (1509224)	747-759
S068	Lens Cleaning Towelette - SDS 2618040050 and Supplier Addendum Includes front matter; SDS starts on library page 761.	760-768
S069	Lubrimatic / Witco Multi Purpose Lithium Grease (N3124 / N3127)	769-773
S070	Lucas Heavy Duty Oil Stabilizer	774-782
S071	Lucas Hub Oil (10088) - 2026 Revision	783-790
S072	Lucas Hub Oil (10089) - 2026 Revision	791-798
S073	Lucas Hub Oil - Earlier SDS	799-808
S074	Lucas Red N Tacky Grease (10005)	809-819
S075	Lucas SAE 80W-90 Gear Oil	820-829
S076	Lucas Synthetic SAE 50 WT Motorcycle Oil (10765)	830-841
S077	MAG 1 Air Compressor Oil (MG06AC16)	842-847
S078	Manus Bond 64-A Premium (MAN-009)	848-853
S079	Manus Bond 65H (MAN-008)	854-861

Doc.	Product / document	Library pages
S080	Manus Bond 75-AM NSF61 (MAN-011)	862-872
S081	Manus-Bond 75-AM HV (MAN-016)	873-884
S082	Manus-Bond 75-AM Industrial Grade (MAN-002)	885-896
S083	MarkLine The Autowriter - All Colors	897-902
S084	MG Chemicals Touch Up Spray Paint	903-921
S085	Milwaukee Lithium-ion Batteries - Rechargeable (58-97-0500)	922-929
S086	Morris Transformer Oil (7851)	930-938
S087	Murphy's Concentrated Tire and Tube Mounting Compound	939-946
S088	NSPA Sealed Solder Connectors - Alpha Preforms Sn50/Pb32/Cd18 with RS2.1 Flux Includes front matter; SDS starts on library page 949.	947-960
S089	Nu-Calgon Cal-Blue Plus Gas Leak Detector	961-967
S090	Paint Stripper (6000)	968-980
S091	PB Penetrating Catalyst - 2017 Revision	981-987
S092	PB Penetrating Catalyst - 2022 Revision	988-999
S093	PEAK -20 F Windshield Wash & De-icer	1000-1008
S094	Penray Air Brake Antifreeze (5601)	1009-1014
S095	Penray Battery Cleaner (7012)	1015-1020
S096	Permatex 133H Anti-Seize Lubricant - 4 oz (80071)	1021-1028
S097	Permatex 133K Anti-Seize Lubricant - 8 oz (80078)	1029-1036
S098	Permatex 84101 5 Minute Epoxy - Resin and Hardener Includes both component SDSs; use the component bookmarks.	1037-1050
S099	Permatex 84109 Steel Weld - Resin (PTX202005B)	1051-1058
S100	Permatex Fast Orange Pumice Lotion - 1 gal (25219)	1059-1068
S101	Permatex Fast Orange Wipes - 72 ct (25051)	1069-1075
S102	Permatex High Strength Threadlocker Red - 6 ml (27100)	1076-1083
S103	Permatex Medium Strength Threadlocker Blue - 6 ml (24200)	1084-1091
S104	Permatex PX 16BR Black RTV Silicone - 3 oz (81158)	1092-1099
S105	Permatex SA9 Battery Protector & Sealer - 5 oz (80370) - 2015 Revision	1100-1109

Doc.	Product / document	Library pages
S106	Permatex SA9 Battery Protector & Sealer - 5 oz (80370) - 2025 Revision	1110-1124
S107	Permatex Ultra Black Gasket Maker - 3 oz (82180) - 2024 Revision	1125-1135
S108	Permatex Ultra Black Gasket Maker - 3.35 oz (82180) - 2016 Revision	1136-1143
S109	Permatex Ultra Red - 3 oz Tube (81630)	1144-1151
S110	Phospho-MSK1 (S376)/MSK2 (S360) Alexa Fluor 700 Affinity Purified PAb (AF1094N)	1152-1158
S111	Premiere Pro Ice Melt	1159-1163
S112	Pro-Lube-VAC Vacuum Pump Oil (VP68-01 / VP68-05 / VP68-32)	1164-1168
S113	Propane - Worthington (UN1075 / WC002)	1169-1177
S114	Purple Power Aluminum Brightener (4115PS / 4120P / 4125P / 4140)	1178-1185
S115	Quali-Pro Chlorothalonil 720 SFT (ADAMA-053A)	1186-1195
S116	QuikSteel Carded - 2 oz (16002TRI)	1196-1207
S117	Rubber Cement - Tire / Tube Repair Kits	1208-1219
S118	Rust-Oleum Hammered Metal Silver - 15 oz (209562)	1220-1226
S119	Rust-Oleum High Performance Blue Striping Paint (2326838)	1227-1233
S120	Rust-Oleum High Performance Yellow Striping Paint (2348838)	1234-1239
S121	Rust-Oleum Low Odor / Water Based Spray Paint - Primer (WPS1887769)	1240-1244
S122	Rust-Oleum Stops Rust Gloss Protective Enamel - Black (7779830)	1245-1250
S123	Sand Cloth - Aluminum Oxide or Silicon Carbide Coated Abrasive (ALCOAT001)	1251-1254
S124	Seal-Gap Roof Sealer (AH-55-A)	1255-1260
S125	Service Pro Hi-Temp Grease	1261-1268
S126	Seymour Glass Cleaner (0000200025)	1269-1272
S127	Sikaflex-221	1273-1287
S128	Sikaflex-252	1288-1301
S129	Sikaflex-521 UV	1302-1310
S130	Silaprene Adhesive Sealant (06328 / M6328)	1311-1321
S131	Silicone Sealant - Colors (KK0201 / KK0202 / KK0202-B / KK0309 / KK0207)	1322-1327
S132	Simple Green Industrial Cleaner & Degreaser	1328-1331

Doc.	Product / document	Library pages
S133	Sprayway Non-Chlorinated Brake Cleaner (17-0607A)	1332-1344
S134	Techspray Freeze Spray (1672-10S / 1672-15S)	1345-1356
S135	TensorGrip C101 Canister Cleaner (TG.C101.22)	1357-1362
S136	Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive	1363-1370
S137	Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive	1371-1381
S138	Tensorgrip L10 High Temp Contact Adhesive	1382-1391
S139	Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner Includes front matter; SDS starts on library page 1394.	1392-1403
S140	Thin Wheel - Cutting (UPC 66252823602)	1404-1410
S141	Thin Wheel - Cutting (UPC 66252838454)	1411-1418
S142	Thin Wheel - Depressed Center (UPC 66252842011)	1419-1427
S143	Thin Wheel Product (UPC 66252840387)	1428-1436
S144	Thin Wheel Product (UPC 66252840388)	1437-1445
S145	Thin Wheel Product (UPC 66252840391)	1446-1454
S146	TODCO FG Lube 39000.1012FG - 12 oz Aerosol (560076) - 2019 Revision	1455-1461
S147	TODCO Food Grade Lubricant (560079) - 2015 Revision	1462-1468
S148	Truck Lite NYK 77 Lubricant (55126NYK)	1469-1476
S149	Ultra-Duty HD 0, 1, 2	1477-1485
S150	Universal Absorbent - NPS Corporation	1486-1490
S151	ZENEX Magic Hand Soap (235883)	1491-1496

Original filename index

Every supplied PDF is listed below. Files with the same document number are exact duplicates and point to the same retained packet.

Original filename	Doc.	Library pages
12031877.pdf	S044	477-502
133K ANTI-SEIZE LUBRICANT.pdf	S097	1029-1036
2ZXE3 B-Screen NO PDCB H-STAMP GRAINGER Green Apple.pdf	S001	19-27
3M™ Hi-Strength Spray Adhesive.pdf	S002	28-41
3M™ Scotch-Brite™ Bristle Disc, Scotch-Brite.pdf	S003	42-50
6536 Degreaser and Brake Cleaner III.pdf	S055	615-625
6540 HEAVY DUTY GLASS CLEANER.pdf	S056	626-635
65HSDS.pdf	S079	854-861
84101 5 MINUTE EPOXY.pdf	S098	1037-1050
A-C Coil Cleaner.pdf	S057	636-640
A1UwL8axrVL.pdf	S124	1255-1260
AA Thread Seal Tape.pdf	S005	62-66
Abrasive Systems Division.pdf	S004	51-61
ALCOAT001.pdf	S123	1251-1254
All Purpose Cemen.pdf	S061	677-687
All sealed Soiler Connectors M351RS2.1.pdf	S088	947-960
ALUM BRIGHTENER CHM4120P.pdf	S114	1178-1185
AMED Sheets, Hookit™ Rolls, Discs 14.pdf	S004	51-61
Brakleen® Brake Parts Cleaner.pdf	S021	189-197
Cal-Blue Plus Gas Leak Detector.pdf	S089	961-967
CHM20-25.pdf	S126	1269-1272
CHMS101-22.pdf	S135	1357-1362
CHMS101-7.pdf	S139	1392-1403
CHMS101-AA.pdf	S139	1392-1403
Coated Finished Flap Discs.pdf	S018	161-169
CRC05023.pdf	S020	181-188
CRC05048.pdf	S023	207-217
CRC05089.pdf	S022	198-206

Original filename	Doc.	Library pages
CRC05103.pdf	S024	218-226
CRC05113.pdf	S025	227-234
DOW12031375.pdf	S028	254-259
DOW12095806.pdf	S030	278-295
DOW12115832.pdf	S039	374-398
DOW12115834.pdf	S043	462-476
DOW12115890.pdf	S038	358-373
DOW158336.pdf	S006	67-79
DOW158403.pdf	S029	260-277
DOW158422.pdf	S029	260-277
Electrodes, Aluminum 4043.pdf	S053	603-610
EP0-CA AA SDS.pdf	S137	1371-1381
Eyesaline Eyewash or Sterile Eyesaline.pdf	S033	316-321
FAST ORANGE WIPES.pdf	S101	1069-1075
Flame-Retardant Heat-Shrink Tubing 1-16.pdf	S035	331-338
Flame-Retardant Heat-Shrink Tubing.pdf	S035	331-338
FOMP12130.pdf	S050	572-578
FOMP12145.pdf	S049	557-571
Food Grade Lubricant.pdf	S147	1462-1468
FORTRESS Spray Disinfectant Deodoran.pdf	S036	339-344
Froth-Pak-Foam-Sealant-SDS-12069387.pdf	S040	399-425
froth-pak-polyurethane-foam-sealant DOW12095807.pdf	S039	374-398
froth-pak-polyurethane-foam-sealant-12069411.pdf	S042	442-461
froth-pak-polyurethane-foam-sealant1109836.pdf	S039	374-398
Froth-Pak_ DOW12031908.pdf	S041	426-441
GDSGQ1403.pdf	S052	588-602
GDSGQ1431.pdf	S122	1245-1250
GDSGQ1434.pdf	S084	903-921
GDSGQ1459.pdf	S066	727-746
GDSGQ1672.pdf	S134	1345-1356
Gloss Black PNT3-1 (ProPar).pdf	S010	93-97

Original filename	Doc.	Library pages
GLOSS BLK HIGH SOLID.pdf	S046	513-527
GLOSS WHITE 085002-0.pdf	S047	528-537
GREAT STUFF™ Gaps & Cracks Insulating Foam.pdf	S048	538-556
HIGH STRENGTH THREADLOCKER RED.pdf	S102	1076-1083
HPERF LSPR 6PK STRIPE YELLOW.pdf	S120	1234-1239
IC LSPR 6PK DARK BLUE STRIPING PAINT.pdf	S119	1227-1233
Ice Melter.pdf	S111	1159-1163
Imperial® Penetrating Oil 2.pdf	S058	641-656
Imperial® Penetrating Oil.pdf	S058	641-656
JOHNSEN'S DOT 4 BRAKE FLUID.pdf	S060	666-676
LENS CLEANING TOWELETTE.pdf	S068	760-768
Lithium-ion Batteries - Rechargeable.pdf	S085	922-929
LUB-GEA001-1.pdf	S051	579-587
LUB-GEA001.pdf	S045	503-512
LUB-GRS005.pdf	S032	306-315
LUB-GRS007.pdf	S017	153-160
LUB-GRS013.pdf	S069	769-773
LUB-GRS018.pdf	S149	1477-1485
LUB-GRS019.pdf	S026	235-243
LUB-OIL003.PDF	S013	120-129
LUB-TRA001.pdf	S086	930-938
LUC10001.pdf	S070	774-782
LUC10005-30.pdf	S074	809-819
LUC10043.pdf	S075	820-829
LUC10088.pdf	S071	783-790
LUC10089.pdf	S072	791-798
LUC10827.pdf	S076	830-841
Lucas Hub Oil.pdf	S073	799-808
MAG 1 AIR COMP OIL.pdf	S077	842-847
MAN-002-Manus-Bond75-AMIndustrialGradeSDS (1).pdf	S082	885-896
MAN-002-Manus-Bond75-AMIndustrialGradeSDS.pdf	S082	885-896

Original filename	Doc.	Library pages
MAN-011-Manus-Bond75-AMNSF61SDS.pdf	S080	862-872
MAN-016-Manus-Bond75-AMHVSDS (1).pdf	S081	873-884
MAN-016-Manus-Bond75-AMHVSDS.pdf	S081	873-884
Manus Bond 64-A Premium.pdf	S078	848-853
Manus Bond 65H.pdf	S079	854-861
MarkLine The Autowriter.pdf	S083	897-902
MEDIUM STRENGTH THREADLOCKER BLUE.pdf	S103	1084-1091
Murphy’s Concentraded Tire Compound.pdf	S087	939-946
No Lap Bands - Coated & Nonwoven.pdf	S007	80-83
Non-Chlorina Brake Cleaner.pdf	S133	1332-1344
OLDDEF002.pdf	S027	244-253
OLDFXAB53.pdf	S034	322-330
PAINT REMOVER PNT20-047.pdf	S090	968-980
PB Penetrating Catalyst.pdf	S091	981-987
PBB16-ATL.pdf	S014	130-134
PBB16-PB-DS.pdf	S092	988-999
PL 9623.pdf	S059	657-665
PNR5632.pdf	S094	1009-1014
PNR7012.pdf	S095	1015-1020
PNT1-1S.pdf	S011	98-110
PNT11-28.pdf	S067	747-759
PNT11-29.pdf	S122	1245-1250
PNT13-22.pdf	S009	88-92
PNT3-1.pdf	S010	93-97
PNT3-20.pdf	S019	170-180
PNT7-30.pdf	S121	1240-1244
Polar Power Diesel Fuel Treatment.pdf	S037	345-357
Portable fuel..pdf	S113	1169-1177
PROCH-BC01.pdf	S015	135-140
PROOHLUBE-1.pdf	S112	1164-1168
PTX25051.pdf	S101	1069-1075

Original filename	Doc.	Library pages
PTX25219.pdf	S100	1059-1068
PTX80071.pdf	S096	1021-1028
PTX80370.pdf	S106	1110-1124
PTX81630.pdf	S109	1144-1151
PTX82180.pdf	S107	1125-1135
PTX84109.pdf	S099	1051-1058
PX 16BR BLACK RTV SILICONE.pdf	S104	1092-1099
Quick-Lok Discs - Coated & Nonwoven.pdf	S008	84-87
Quick-Patch-QP300-SDS-Part-A.pdf	S064	708-716
QUIKSTEEL CARDED.pdf	S116	1196-1207
RADEB1.pdf	S031	296-305
RADM4814.pdf	S016	141-152
RADM720.pdf	S115	1186-1195
ROHPER LSPR HAMMER METAL SILVER.pdf	S118	1220-1226
Rubber Cement.pdf	S117	1208-1219
SA9 BATTERY PROTECTOR & SEALER.pdf	S105	1100-1109
SAND CLOTH.pdf	S123	1251-1254
SDS-CRACK-FILLER-PART-A-FP100A.pdf	S062	688-697
SDS-CRACK-FILLER-PART-B-FP100B.pdf	S063	698-707
SDS-QUICK-PATCH-PART-B-QP300B.pdf	S065	717-726
Service Pro Hi-Temp Grease.pdf	S125	1261-1268
SHIELDED METAL ARC WELDING (SMAW) ELECTRODES 2.pdf	S054	611-614
SHIELDED METAL ARC WELDING (SMAW) ELECTRODES.pdf	S054	611-614
SIK106094.pdf	S110	1152-1158
Sikaflex-221 (1).pdf	S127	1273-1287
Sikaflex-221 (2).pdf	S127	1273-1287
Sikaflex-221.pdf	S127	1273-1287
Sikaflex-252.pdf	S128	1288-1301
Sikaflex-521-UV.pdf	S129	1302-1310
SIL_DC06328_(M6328_SILAPRENE_ADHESIVE_SEALANT)_USA_SDS_EN.pdf	S130	1311-1321
Silicone-Sealant-Colors-SDS.pdf	S131	1322-1327

Original filename	Doc.	Library pages
Simple Green® Industrial Cleaner & Degreaser.pdf	S132	1328-1331
Tensorgrip chkme10-zf-22.pdf	S138	1382-1391
Tensorgrip CHMEP0-CA-22.pdf	S136	1363-1370
Thin Wheel - Cutting 4.pdf	S141	1411-1418
Thin Wheel - Cutting.pdf	S140	1404-1410
Thin Wheel - Depressed Center.pdf	S142	1419-1427
Thin Wheel Product 2.pdf	S144	1437-1445
Thin Wheel Product 3.pdf	S143	1428-1436
Thin Wheel Product.pdf	S145	1446-1454
TOD39000-1012.pdf	S146	1455-1461
Truck Lite NYK 77 Lubricant.pdf	S148	1469-1476
ULTRA BLACK GASKET MAKER.pdf	S108	1136-1143
Universal Absorbent.pdf	S150	1486-1490
WAS20F6.pdf	S093	1000-1008
WLK440161.pdf	S012	111-119
WLK440162.pdf	S012	111-119
ZENEX International.pdf	S151	1491-1496

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/05/2019 Reviewed on 02/05/2019

*
1 Identification

· **Product identifier** 2ZXE3

· **Trade name: 2ZXE3 B/Screen NO PDCB H/STAMP GRAINGER Green Apple**

· **Manufacturer article number:** ETACP115
· **Application of the substance / the mixture** Air Freshener.

· **Details of the supplier of the safety data sheet** (770)(46)
· **Manufacturer/Supplier:**
Industrias Salcom, SA de CV
Calle 2 No. 10540
Parque Industrial El Salto
EL SALTO, JAL, ZP.45680
MEXICO
fredcominu@wiese.com.mx
Tel: +52 33 3688 0850
FAX: +52 33 36880850

· **Information department:** Product Safety Deparment
· **Emergency telephone number:** +52 33 3688 0850

*
2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
sodium dodecylbenzenesulphonate, pure
alpha-Amylcinnamaldehyde
· **Hazard statements**
Harmful if swallowed.
May cause an allergic skin reaction.
· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
If swallowed: Call a poison center/doctor if you feel unwell.

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Trade name: 2ZXE3 B/Screen NO PDCB H/STAMP GRAINGER Green Apple

(Contd. of page 1)

Rinse mouth.
If on skin: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*

*
3 Composition/information on ingredients

· **Description:** *Mixture of the substances listed below with nonhazardous additions.*

· **Dangerous components:**		
7757-82-6	sodium sulphate	>50-≤100%
25155-30-0	sodium dodecylbenzenesulphonate, pure	>10-≤25%
68140-00-1	Cocamide MEA	>2.5-<10%
	Fragrance Trade Secret (770)	>2.5-≤10%
122-40-7	alpha-Amylcinnamaldehyde	≥0.1-<1%

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
· **After eye contact:** *Rinse opened eye for several minutes under running water.*
· **After swallowing:**
If swallowed, rinse mouth with water (only if the person is conscious). Call a POISON CENTER or doctor/physician. Obtain emergency medical attention.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

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· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

*
5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

*
6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
General measures:
Avoid contact with skin and eyes. Eliminate all ignition sources if safe to do so. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not breathe dust, fume. Spilled material may present a slipping hazard.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
7757-82-6	sodium sulphate	9.8 mg/m³
25155-30-0	sodium dodecylbenzenesulphonate, pure	2.1 mg/m³
100-51-6	Benzyl alcohol	30 ppm

· **PAC-2:**		
7757-82-6	sodium sulphate	110 mg/m³
25155-30-0	sodium dodecylbenzenesulphonate, pure	23 mg/m³
100-51-6	Benzyl alcohol	52 ppm

· **PAC-3:**		
7757-82-6	sodium sulphate	650 mg/m³
25155-30-0	sodium dodecylbenzenesulphonate, pure	87 mg/m³
100-51-6	Benzyl alcohol	740 ppm

*
7 Handling and storage

· **Handling:**
· **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.

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Trade name: 2ZXE3 B/Screen NO PDCB H/STAMP GRAINGER Green Apple

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· **Further information about storage conditions:** None.
· **Specific end use(s)** No further relevant information available.

*
8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

7757-82-6 sodium sulphate	
TLV	Short-term value: NIC-0.2 mg/m³ thoracic fraction of aerosol

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Not required.

*
9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Solid
Color:	According to product specification

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· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	0.0 Vol %
Upper:	0.0 Vol %
· **Vapor pressure:**	Not applicable.
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapor density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Solvent content:**	
Organic solvents:	0.0 %
VOC content:	0.04 %
	0.0 g/l / 0.00 lb/gal
Solids content:	97.2 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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*
11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
97-53-0	Eugenol	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

*
12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

*
13 Disposal considerations

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, ADN, IMDG, IATA**	not regulated
· **UN proper shipping name**	
· **DOT, ADN, IMDG, IATA**	not regulated

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· **Transport hazard class(es)**	
· **DOT, ADN, IMDG, IATA**	
· **Class**	not regulated
· **Packing group**	
· **DOT, IMDG, IATA**	not regulated
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	not regulated

*
15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

7757-82-6	sodium sulphate
25155-30-0	sodium dodecylbenzenesulphonate, pure
68140-00-1	Cocamide MEA
122-40-7	alpha-Amylcinnamaldehyde
138-86-3	dipentene
78-70-6	Linalool
106-24-1	Geraniol
5392-40-5	Citral
97-53-0	Eugenol
100-51-6	Benzyl alcohol

· **TSCA new (21st Century Act) (Substances not listed)**
Fragrance Trade Secret (770)

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
sodium dodecylbenzenesulphonate, pure
alpha-Amylcinnamaldehyde
· **Hazard statements**
Harmful if swallowed.
May cause an allergic skin reaction.
· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin: Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product Safety Department
· **Contact:** +52 33 3688 0850
· **Date of preparation / last revision** 02/05/2019 / 5
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association

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ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Skin Sens. 1: Skin sensitisation – Category 1

· **** Data compared to the previous version altered.***

Safety Data Sheet

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Document Group:	16-4935-9	**Version Number:**	12.07
Issue Date:	01/16/26	**Supersedes Date:**	04/04/25

SECTION 1: Identification

1.1. Product identifier
3M™ Hi-Strength Spray Adhesive 90 (aerosol)

Product Identification Numbers
62-4942-4730-7, 62-4942-4920-4, 62-4942-4921-2, 62-4942-4922-0, 62-4942-4925-3, 62-4942-4927-9, 62-4942-4930-3, 62-4942-4935-2, 62-4942-4950-1, 62-4942-4955-0, 62-4942-4970-9, 62-4942-4975-8, CS-0406-7111-0
7010329926, 7000121431, 7000023924, 7010292719, 7000121432, 7010366485, 7010366483, 7010310279

1.2. Recommended use and restrictions on use

Recommended use
Aerosol adhesive. Recommended for industrial and professional use., hi-strength aerosol adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Aerosol Category 1
Serious Eye Damage/Irritation: Category 2B.
Reproductive Toxicity: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Simple Asphyxiants: Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Flame |Exclamation mark |Health Hazard |

Pictograms



Hazard Statements
Extremely flammable aerosol.
Pressurized container: may burst if heated.

Causes eye irritation.
May damage fertility or the unborn child.
May cause drowsiness or dizziness.
May cause respiratory irritation.
May displace oxygen and cause rapid suffocation.
Causes damage to organs: cardiovascular system.

Precautionary statements
General:
Keep out of reach of children.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Do not breathe vapor or spray.
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves and if needed, respiratory protection (see SDS Section 8).

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Call a POISON CENTER or doctor.
If eye irritation persists: Get medical advice.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 122°F (50°C).

Disposal:
Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

Notes to Physician:
Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

Supplemental Information:
Intentional concentration and inhalation may be harmful or fatal.

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8% of the mixture consists of ingredients of unknown acute oral toxicity.
8% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Dimethyl Ether	115-10-6	30 - 60 Trade Secret *
Methyl Acetate	79-20-9	10 - 30 Trade Secret *
Cyclohexane	110-82-7	7 - 13 Trade Secret *
DIPENTENE-STYRENE COPOLYMER	64536-06-7	5 - 10
Nonvolatile components (NJTS Reg. No 0449960-6448P)	Trade Secret*	1 - 10
1,1-Difluoroethane	75-37-6	1 - 5 Trade Secret *
Pentane	109-66-0	1 - 5 Trade Secret *
Toluene	108-88-3	< 0.2

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. Get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required
Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode. Exposure to extreme heat can give rise to thermal decomposition.

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Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Formaldehyde	During Combustion
Methane	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Fluoride	During Combustion
Irritant Vapors or Gases	During Combustion
Ketones	During Combustion

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions
For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Close cylinder. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not breathe thermal decomposition products. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store away from heat. Store away from acids. Store away from oxidizing agents.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin, Ototoxicant
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
Pentane	109-66-0	OSHA	TWA:2950 mg/m3(1000 ppm)	
Pentane, all isomers	109-66-0	ACGIH	TWA:1000 ppm	
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Cyclohexane	110-82-7	OSHA	TWA:1050 mg/m3(300 ppm)	
Dimethyl Ether	115-10-6	AIHA	TWA:1880 mg/m3(1000 ppm)	
1,1-Difluoroethane	75-37-6	AIHA	TWA:2700 mg/m3(1000 ppm)	
Methyl Acetate	79-20-9	ACGIH	TWA:200 ppm;STEL:250 ppm	
Methyl Acetate	79-20-9	OSHA	TWA:610 mg/m3(200 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines. Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

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An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use a positive pressure supplied-air respirator.
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates
Half facepiece or full facepiece supplied-air respirator
Organic vapor cartridges may have short service life.

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Gas
Specific Physical Form:	Aerosol
Color	Colorless
Odor	Fruity Odor, Mild Solvent
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point/Freezing point	*Not Applicable*
Boiling point/Initial boiling point/Boiling range	*Not Applicable*
Flash Point	-41.1 ºC [*Test Method:*Tagliabue Closed Cup]
Evaporation rate	1.9 [*Ref Std:*ETHER=1]
Flammability	Flammable Aerosol: Category 1.
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	[*Details:*Compressed gas]*Not Applicable*
Relative Vapor Density	2.97 [*Ref Std:*AIR=1]
Density	0.726 g/ml
Relative Density	0.726 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*Not Applicable*
Kinematic Viscosity	100 mm2/sec
Volatile Organic Compounds	*No Data Available*
Percent volatile	*No Data Available*
VOC Less H2O & Exempt Solvents	<=55 % [*Test Method:*calculated per CARB title 2]
Molecular weight	*No Data Available*

Particle Characteristics	*Not Applicable*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

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Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Simple Asphyxiation: Signs/symptoms may include increased heart rate, rapid respirations, drowsiness, headache, incoordination, altered judgement, nausea, vomiting, lethargy, seizures, coma, and may be fatal.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

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Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Single exposure, above recommended guidelines, may cause: Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dimethyl Ether	Inhalation-Gas (4 hours)	Rat	LC50 164,000 ppm
Methyl Acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Methyl Acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 49 mg/l
Methyl Acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
Cyclohexane	Ingestion	Rat	LD50 6,200 mg/kg
Pentane	Dermal	Rabbit	LD50 3,000 mg/kg
Pentane	Inhalation-Vapor (4 hours)	Rat	LC50 > 18 mg/l
Pentane	Ingestion	Rat	LD50 > 2,000 mg/kg
1,1-Difluoroethane	Inhalation-Gas (4 hours)	Rat	LC50 > 437,000 ppm
Nonvolatile components (NJTS Reg. No 0449960-6448P)	Dermal	Rabbit	LD50 > 2,000 mg/kg
Nonvolatile components (NJTS Reg. No 0449960-6448P)	Ingestion	Rat	LD50 > 5,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Methyl Acetate	Rabbit	No significant irritation
Cyclohexane	Rabbit	Mild irritant
Pentane	Rabbit	Minimal irritation
Nonvolatile components (NJTS Reg. No 0449960-6448P)	Professional judgement	No significant irritation
Toluene	Rabbit	Irritant

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Serious Eye Damage/Irritation

Name	Species	Value
Methyl Acetate	Rabbit	Moderate irritant
Cyclohexane	Rabbit	Mild irritant
Pentane	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Methyl Acetate	Human	Not classified
Pentane	Guinea pig	Not classified
Toluene	Guinea pig	Not classified

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Dimethyl Ether	In Vitro	Not mutagenic
Dimethyl Ether	In vivo	Not mutagenic
Methyl Acetate	In Vitro	Not mutagenic
Methyl Acetate	In vivo	Not mutagenic
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
Pentane	In vivo	Not mutagenic
Pentane	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1-Difluoroethane	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1-Difluoroethane	In vivo	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Dimethyl Ether	Inhalation	Rat	Not carcinogenic
1,1-Difluoroethane	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Dimethyl Ether	Inhalation	Not classified for development	Rat	NOAEL 40,000 ppm	during organogenesis
Cyclohexane	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation

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Cyclohexane	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation
Pentane	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
Pentane	Inhalation	Not classified for development	Rat	NOAEL 30 mg/l	during organogenesis
1,1-Difluoroethane	Inhalation	Not classified for development	Rat	NOAEL 50,000 ppm	during organogenesis
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl Ether	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 10,000 ppm	30 minutes
Dimethyl Ether	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 100,000 ppm	5 minutes
Methyl Acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Methyl Acetate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Methyl Acetate	Inhalation	blindness	Not classified		NOAEL Not available	
Methyl Acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Pentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
Pentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
Pentane	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL Not available	not available
Pentane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	not available
1,1-Difluoroethane	Inhalation	cardiac sensitization	Causes damage to organs	Human and	NOAEL Not available	poisoning and/or abuse

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				animal		
1,1-Difluoroethane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL 100,000 ppm	
1,1-Difluoroethane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl Ether	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 25,000 ppm	2 years
Dimethyl Ether	Inhalation	liver	Not classified	Rat	NOAEL 20,000 ppm	30 weeks
Methyl Acetate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	28 days
Methyl Acetate	Inhalation	endocrine system	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Methyl Acetate	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Methyl Acetate	Inhalation	liver	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Methyl Acetate	Inhalation	immune system	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Methyl Acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 8.6 mg/l	30 weeks
Pentane	Inhalation	peripheral nervous system	Not classified	Human	NOAEL Not available	occupational exposure
Pentane	Inhalation	heart	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	skin	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	endocrine system	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	liver	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	immune system	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	muscles	Not classified	Rat	NOAEL 20	13 weeks

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					mg/l	
Pentane	Inhalation	nervous system	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	eyes	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	respiratory system	Not classified	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	28 days
1,1-Difluoroethane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 25,000 ppm	2 years
1,1-Difluoroethane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 25,000 ppm	2 years
1,1-Difluoroethane	Inhalation	respiratory system	Not classified	Rat	NOAEL 25,000 ppm	2 years
Toluene	Inhalation	auditory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	liver	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks

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Aspiration Hazard

Name	Value
Cyclohexane	Aspiration hazard
Pentane	Aspiration hazard
Toluene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. Combustion products will include HF. Facility must be capable of handling halogenated materials. The facility should be equipped to handle gaseous waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D035 (Methyl ethyl ketone)

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Flammable (gases, aerosols, liquids, or solids)

Health Hazards
Reproductive toxicity
Serious eye damage or eye irritation
Simple Asphyxiant

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Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Cyclohexane	110-82-7	Trade Secret 7 - 13

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 3 **Flammability:** 4 **Instability:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

The NFPA Health code of 3 is due to emergency situations where the material may thermally decompose and release Hydrogen Fluoride. During normal use conditions, please reference Section 2 and Section 11 of the SDS for additional health hazard information.

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Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Brite™ Bristle Disc, Scotch-Brite™ Radial Bristle Disc, Scotch-Brite™ Radial Bristle Brush, Scotch-Brite ™ Roloc™ Body Man's Bristle Disc

1.2. Recommended use and restrictions on use

Recommended use
Abrasive Product

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Abrasive Systems Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

2.3. Hazards not otherwise classified
None.

75% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	1344-28-1	20 - 35
Titanium Dioxide	13463-67-7	.15 - 1.25
Cured Resin	Mixture	60 - 75
Roloc™ Attachment	Mixture	0 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Observe precautions from other sections.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial or professional use only. Avoid breathing of dust created by sanding, grinding or machining. Damaged product can break apart during use and cause serious injury to face or eyes. Check product for damage such as cracks or nicks prior to use. Replace if damaged. Always wear eye and face protection when working at sanding or grinding operations or when near such operations. Combustible dust may form by action of this product on another material (substrate). Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source. Dust deposits should not be allowed to accumulate on surfaces because of the potential for secondary explosions.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	1344-28-1	CMRG	TWA:1 fiber/cc	
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	1344-28-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m3	
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Provide appropriate local exhaust ventilation for sanding, grinding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Provide local exhaust at

process emission sources to control exposure near the source and to prevent the escape of dust into the work area. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

8.2.2. Personal protective equipment (PPE)

Eye/face protection

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

Respiratory protection

Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Odor, Color, Grade:	Solid Abrasive Product
Odor threshold	*Not Applicable*
pH	*Not Applicable*
Melting point	*Not Applicable*
Boiling Point	*Not Applicable*
Flash Point	*Not Applicable*
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Specific Gravity	*Not Applicable*
Solubility In Water	*Not Applicable*
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*Not Applicable*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*Not Applicable*
Viscosity	*Not Applicable*
Hazardous Air Pollutants	*No Data Available*
Volatile Organic Compounds	*No Data Available*

Percent volatile	*No Data Available*
VOC Less H2O & Exempt Solvents	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling,

pain, tearing, and blurred or hazy vision.

Ingestion:
No health effects are expected.

Carcinogenicity:

Ingredient	C.A.S. No.	Class Description	Regulation
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Additional Information:
This document covers only the 3M product. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

This product contains titanium dioxide. Cancer of the lungs has been observed in rats that inhaled high levels of titanium dioxide. No exposure to inhaled titanium dioxide is expected during the normal handling and use of this product. Titanium dioxide was not detected when air sampling was conducted during simulated use of similar products containing titanium dioxide. Therefore, the health effects associated with titanium dioxide are not expected during the normal use of this product.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Ingestion	Rat	LD50 > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Titanium Dioxide	Human and animal	Not sensitizing

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

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Name	Route	Value
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	In Vitro	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Inhalation	Rat	Not carcinogenic
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Inhalation	pneumoconiosis | pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. ***As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging.*** *3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and* ***not*** ***the packaging, labeling, or marking requirements.*** *The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar

emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 0 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

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SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Brite™ Products, Surface Conditioning: AMED: Sheets, Hookit™, Rolls, Discs (Roloc™, TN, TP, TR, TS, TSM), Belts, Scrim Belts

1.2. Recommended use and restrictions on use

Recommended use
Abrasive Product

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Abrasive Systems Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

2.3. Hazards not otherwise classified

80% of the mixture consists of ingredients of unknown acute oral toxicity.
80% of the mixture consists of ingredients of unknown acute dermal toxicity.
84% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Aluminum Oxide Mineral (non-fibrous)	1344-28-1	25 - 45
Filler	1317-65-3	3 - 8
Lubricant	64742-54-7	1 - 2
Titanium Dioxide	13463-67-7	0.2 - 1.5
Quartz Silica	14808-60-7	0.001 - 0.15
Cured Resin	Mixture	20 - 40
Nylon Fiber	Mixture	10 - 25
Nylon Scrim	Mixture	5 - 15
Poly(Vinyl Chloride)	9002-86-2	0.5 - 1.75
Attachment Button	Mixture	0 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion

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Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Observe precautions from other sections.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial or professional use only. Avoid breathing of dust created by sanding, grinding or machining. Damaged product can break apart during use and cause serious injury to face or eyes. Check product for damage such as cracks or nicks prior to use. Replace if damaged. Always wear eye and face protection when working at sanding or grinding operations or when near such operations. Combustible dust may form by action of this product on another material (substrate). Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source. Dust deposits should not be allowed to accumulate on surfaces because of the potential for secondary explosions.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Filler	1317-65-3	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Aluminum Oxide Mineral (non-fibrous)	1344-28-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz Silica	14808-60-7	OSHA	TWA Table Z-1(respirable):0.05	

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			mg/m3;TWA Table Z-3(respirable):0.1 mg/m3	
Poly(Vinyl Chloride)	9002-86-2	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Provide appropriate local exhaust ventilation for sanding, grinding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Warning: Excessive operating speed or generation of extreme heat may result in harmful emissions. Use local exhaust ventilation. Provide local exhaust at process emission sources to control exposure near the source and to prevent the escape of dust into the work area. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

8.2.2. Personal protective equipment (PPE)

Eye/face protection

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

Respiratory protection

Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Odor, Color, Grade:	Solid Abrasive Product
Odor threshold	*Not Applicable*
pH	*Not Applicable*

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Melting point	*Not Applicable*
Boiling Point	*Not Applicable*
Flash Point	*Not Applicable*
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Specific Gravity	*Not Applicable*
Solubility In Water	*Not Applicable*
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*Not Applicable*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*Not Applicable*
Viscosity	*Not Applicable*
Hazardous Air Pollutants	*No Data Available*
Percent volatile	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

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Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:
No known health effects.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Quartz Silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Additional Information:
This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

This document covers only the 3M product. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

This product contains titanium dioxide and quartz (crystalline) silica. Cancer of the lungs has been associated with inhalation of high levels of titanium dioxide in animal studies, and occupational exposure to inhaled quartz silica has been associated with silicosis and lung cancer. No exposure to titanium dioxide or quartz silica is expected during the normal handling and use of this product. Titanium dioxide and quartz silica were not detected when air sampling was conducted during simulated use of similar products containing these substances. Therefore, the health effects associated with titanium dioxide and quartz (crystalline) silica are not expected during the normal use of this product.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Aluminum Oxide Mineral (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum Oxide Mineral (non-fibrous)	Inhalation-Dust/Mist	Rat	LC50 > 2.3 mg/l

	(4 hours)		
Aluminum Oxide Mineral (non-fibrous)	Ingestion	Rat	LD50 > 5,000 mg/kg
Filler	Dermal	Rat	LD50 > 2,000 mg/kg
Filler	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Filler	Ingestion	Rat	LD50 6,450 mg/kg
Poly(Vinyl Chloride)	Dermal		LD50 estimated to be > 5,000 mg/kg
Poly(Vinyl Chloride)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Lubricant	Dermal	Rabbit	LD50 > 5,000 mg/kg
Lubricant	Ingestion	Rat	LD50 > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Rabbit	No significant irritation
Filler	Rabbit	No significant irritation
Poly(Vinyl Chloride)	Professional judgement	No significant irritation
Lubricant	Rabbit	Minimal irritation
Titanium Dioxide	Rabbit	No significant irritation
Quartz Silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Rabbit	No significant irritation
Filler	Rabbit	No significant irritation
Lubricant	Rabbit	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Lubricant	Guinea pig	Not classified
Titanium Dioxide	Human and animal	Not classified

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Aluminum Oxide Mineral (non-fibrous)	In Vitro	Not mutagenic
Poly(Vinyl Chloride)	In Vitro	Not mutagenic

Lubricant	In Vitro	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Aluminum Oxide Mineral (non-fibrous)	Inhalation	Rat	Not carcinogenic
Poly(Vinyl Chloride)	Not Specified	Rat	Some positive data exist, but the data are not sufficient for classification
Lubricant	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Quartz Silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Filler	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Poly(Vinyl Chloride)	Not Specified	Not classified for development	Mouse	NOAEL Not available	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Filler	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes
Lubricant	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Lubricant	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Aluminum Oxide Mineral (non-fibrous)	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminum Oxide Mineral (non-fibrous)	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Filler	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Poly(Vinyl Chloride)	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 0.013 mg/l	22 months

Lubricant	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.21 mg/l	28 days
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

EPCRA 311/312 Hazard Classifications (effective January 1, 2018):

Physical Hazards
Not applicable

Health Hazards
Not applicable

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 0 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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user's method of use or application.Given the variety of factors that can affect the use and application of a3Mproduct, some of which are uniquely within the user's knowledge and control,it is essential that the user evaluate the3Mproduct to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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HAZARD COMMUNICATION SAFETY DATA SHEET

PRODUCT: PTFE Thread Seal Tape Revision Date 6/1/15

Section 1: Chemical Product and Company Identification

Manufacturer

AA Thread Seal Tape, Inc.
1275 Kyle ct.
Wauconda, IL 60084
Telephone Number: 800-537-7139

Product Identifier: Thread Tape PTFE Tape
Product Description: PTFE Tape
Product Use: For use on threaded joints of pipe (not exceeding 4" pipe size) in assembles handling gasoline, petroleum oils, propane, butane, naptha, benzene Natural gas and LP-gas in vapor state (temperatures of -65F to 700F, pressure not over 300 psi). A minimum of three full wraps is required for pipe up to 1"

Section 2: Hazard Identification

HMIS HAZARD IDENTIFICATION
Health 1 Flammability 1 Reactivity 0

EMERGENCY OVERVIEW:
Physical Hazards: May become slippery under foot
Acute Health Effects: No known toxicity below 500F
Chronic Health Effects: No chronic health effects are expected

Section 3: Information on Ingredients

Contains: Polytetrafluoroethylene CAS # 9002-84-0
Polytetrafluoroethylene can emit toxic vapors at temperatures exceeding 700F, See Section 5 for additional information
Contains 99.5% pure Virgin PTFE

Section 4: First Aid Measures

INHALATION: Not expected to become a significant inhalation hazard under normal conditions of use.
INGESTION: If ingested this product is not expected to cause an acute reactions. Give two glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.
EYES: Not expected to come in contact with eyes. In the unlikely event of eye exposure no effects are expected other than normal irritation produced by foreign body in eye. Flush with water. Lasting irritation see a physician.
SKIN: Skin contact may in isolated cases cause allergic reaction common with most other materials. Wash well soap and water. If irritation persists see physician.

Material Safty Data Sheet Continued

Section 5: Fire Fighting Measures

Extinguishing Media: Foam (Aqueous Film Forming Foam), dry chemical, carbon dioxide.

Special Precautions: This compound will not burn unless its pre-heated. Water fog may be used to cool the containers, however frothing may occur if water is sprayed directly into burning containers. Do not enter fire area without proper protection.

Hazardous Combustion Products: The thermal decomposition products are highly dependant upon the combustion conditions. Noxious or toxic fumes may be generated, some of which may be toxic or irritating. Polytetrafluoroethylene can eemit toxic fumes when heated to temperatures exceeding 700F. The max operating temperature for this compound is around 500F. At these temps PTFE does not undergo any thermal degradetion and is not hazardous.

Flash Point: Not established

Lower Flammable Limit: Not established

Upper Flammable Limit: Not established

Autoignition Temperature: Not established

Section 6: Accidental Release Measures

Spills cannot occur. Dispose of any excess material in safe manner. Incineration is to be avoided

Section 7: Handling and Storage

Handling: Avoid contact with the skin and eyes. Use good industrial hygiene practices. Keep containers closed. Wash hands after using product and before eating, drinking, smoking, or using toilet facilities. For opeeration at ambient temps of -65F to 700F and pressure up to 300 psi.

Storage: Store in a dry place away from moisture, excessive heat and sources of ignition at ambient air temperatures of -65F to 700F and preassure up to 300 psi. Avoid storage near food to prevent food contamination.

Section 8: Exposure Controls/Personal Protection

Ventilation Requirements: In confined areas local and general ventilation should be provided. Ventilation systems must be designated accorfing to approved engineering standards.

Personal Protection:

Eye: Wearing of protective glasses is recommended when handling any chemicals.

Gloves: Only in rare case where allergies are apparent are gloves necessary.

Respiratory Provide adequate ventilation in workplace.

Other: Eating and smoking should be prohibited in areas where product is handled Nothing replaces good personal hygiene. Coveralls or other full body clothing shall be worn and properly laundered after use. Workers should wash hands, face, neck and arms before eating, drinking or smoking.

Material Safty Data Sheet Continued

Section 9: Physical and Chemical Properties

Physical State:	Tape
Odor and Appearance:	Odorless
Lowest Boiling point:	Does not apply
Vapor Pressure:	Not established
Vapor Density	Not established
Water Solubility:	Insoluble
% Organic Volatiles:	0.0% w/w
pH:	N.A.

Section 10: Stability and Reactivity

Stability:	Stable under normal conditions.
Reactivity:	Unknown

Section 11: Toxicological Information

Exposure limites: The limits reported in Section 2 of this document refer to other physical forms of the ingredients present in this product. Limits for the formulated product have not been determined.

None of the components of this product have been reported as carcinogenic by NTP, OSHA or IARC.

Section 12: Ecological Information

General: No special procedures

Section 13: Disposal Information

Waste materials must be disposed of in accordance with your municpal, state, provincial and federal regulations. Contact the proper authorities for specific instructions. Avoid incineration.

Section 14: Transport Information

DOT Hazard Class:	Not regulated
Proper Shipping Name:	Not regulated
Identification Number:	Not regulated

Section 15: Regulatory Information

Listed below are chemical substances subject to supplier notification requirements. The percentages when presented represent average values.

CAS Number	**SARA**	**WHMIS**	**CA-65**
	313		

None

CA-65 - Chemical Substance identified under the California Proposition 65 column are known to the State of California to Cause and/or reproductive toxicity.

TSCA Status:

All ingredients of product comply with the requirements of the US EPA Toxic Substance Control Act.

Material Safty Data Sheet Continued

Section 16: Other

Prepared by Management

The above information and recommendations are believed accurate and reliable. Because it is not possible to anticipate all conditions of use, addition saftey precaustions may be required. AA Thread Seal Tape, Inc. makes no warranty, either expressed or implied, including merchantability and fitness.

User Responsibility: Each user should read and understand this information and incorporate it into individual site saftey programs in accordance with applicable hazard communication standards and regulations.

SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: ACRYSOL™ RM-7 Rheology Modifier

Issue Date: 05/31/2024
Print Date: 06/01/2024

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: ACRYSOL™ RM-7 Rheology Modifier

Recommended use of the chemical and restrictions on use
Identified uses: Coating additives, Rheology Modifiers.

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2211 H.H. DOW WAY
MIDLAND MI 48674
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: CHEMTREC +1 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Not a hazardous substance or mixture.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Acrylic emulsion
This product is a mixture.

Component	CASRN	Concentration

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Acrylic polymer(s)	Not hazardous	>= 29.0 - <= 31.0 %
Residual monomers	Not required	< 500.0 PPM
Water	7732-18-5	>= 69.0 - <= 71.0 %

4. FIRST AID MEASURES

Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing; consult a physician.

Skin contact: Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: Rinse mouth with water. No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire..

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon dioxide.. Carbon monoxide..

Unusual Fire and Explosion Hazards: Material can splatter above 100C/212F.. Dried product can burn..

Advice for firefighters

Fire Fighting Procedures: No data available

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep people away from and upwind of spill/leak. Material can create slippery conditions.

Environmental precautions: CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Methods and materials for containment and cleaning up: Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapors, mist or gas.

Conditions for safe storage: Keep from freezing - product stability may be affected. STIR WELL BEFORE USE.

Storage stability
Storage temperature: 1 - 49 °C (34 - 120 °F)
Other data: Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Exposure controls
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures
Eye/face protection: Use safety glasses (with side shields).
Skin protection
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application

and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid Milky
Color	white
Odor	Acrylic odor
Odor Threshold	No data available
pH	3.8 - 4.8
Melting point/range	0 °C (32 °F) Water
Freezing point	No data available
Boiling point (760 mmHg)	100.00 °C (212.00 °F) Water
Flash point	Noncombustible
Evaporation Rate (Butyl Acetate = 1)	<1.00 Water
Flammability (solid, gas)	Not Applicable
Lower explosion limit	Not Applicable
Upper explosion limit	Not Applicable
Vapor Pressure	17 mmHg at 20.00 °C (68.00 °F) Water
Relative Vapor Density (air = 1)	<1.0000 Water
Relative Density (water = 1)	1.0000 - 1.2000
Water solubility	partly miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not Applicable
Decomposition temperature	No data available
Dynamic Viscosity	25 mPa.s maximum
Kinematic Viscosity	No data available
Explosive properties	No data available

Oxidizing properties	No data available
Molecular weight	No data available
Percent volatility	69.000 - 71.000 % Water

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: None reasonably foreseeable.

Chemical stability: Stable

Possibility of hazardous reactions: Product will not undergo polymerization.

Conditions to avoid: No data available

Incompatible materials: There are no known materials which are incompatible with this product.

Hazardous decomposition products: Thermal decomposition may yield acrylic monomers..

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data are available.

Information on likely routes of exposure
Ingestion, Inhalation, Skin contact, Eye contact.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute Toxicity Endpoints:
Not classified due to lack of data.

Acute oral toxicity

Information for the Product:

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Based on testing for product(s) in this family of materials:
LD50, > 5,000 mg/kg

Information for components:

Acrylic polymer(s)
Single dose oral LD50 has not been determined.

Residual monomers
Single dose oral LD50 has not been determined.

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Acute dermal toxicity

Information for the Product:

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Based on testing for product(s) in this family of materials:
LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

Information for components:

Acrylic polymer(s)
The dermal LD50 has not been determined.

Residual monomers
The dermal LD50 has not been determined.

Acute inhalation toxicity

Information for the Product:

Brief (minutes) exposure to vapor, mist or dust is not likely to cause adverse effects.

As product: The LC50 has not been determined.

Information for components:

Acrylic polymer(s)
The LC50 has not been determined.

Residual monomers
The LC50 has not been determined.

Skin corrosion/irritation

Not classified due to lack of data.

Information for the Product:

Based on testing for product(s) in this family of materials:
Brief contact may cause slight skin irritation with local redness.

Information for components:

Acrylic polymer(s)
Essentially nonirritating to skin.

Residual monomers
Essentially nonirritating to skin.

Serious eye damage/eye irritation

Not classified due to lack of data.

Information for the Product:

Based on testing for product(s) in this family of materials:
May cause slight eye irritation.
Corneal injury is unlikely.

Information for components:

Acrylic polymer(s)
Essentially nonirritating to eyes.

Residual monomers
Essentially nonirritating to eyes.

Sensitization

For skin sensitization:
Not classified due to lack of data.

For respiratory sensitization:
Not classified due to lack of data.

Information for the Product:

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Information for components:

Acrylic polymer(s)
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Residual monomers
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Not classified due to lack of data.

Information for the Product:

Product test data not available.

Information for components:

Acrylic polymer(s)
Available data are inadequate to determine single exposure specific target organ toxicity.

Residual monomers
Available data are inadequate to determine single exposure specific target organ toxicity.

Aspiration Hazard

Not classified due to lack of data.

Information for the Product:

Based on physical properties, not likely to be an aspiration hazard.

Information for components:

Acrylic polymer(s)
Based on physical properties, not likely to be an aspiration hazard.

Residual monomers
Based on available information, aspiration hazard could not be determined.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Not classified due to lack of data.

Information for the Product:

Product test data not available.

Information for components:

Acrylic polymer(s)
No relevant data found.

Residual monomers
No relevant data found.

Carcinogenicity

Not classified due to lack of data.

Information for the Product:

Product test data not available.

Information for components:

Acrylic polymer(s)

No relevant data found.

Residual monomers
No relevant data found.

Teratogenicity

Not classified due to lack of data.

Information for the Product:

Product test data not available.

Information for components:

Acrylic polymer(s)
No relevant data found.

Residual monomers
No relevant data found.

Reproductive toxicity

Not classified due to lack of data.

Information for the Product:

Product test data not available.

Information for components:

Acrylic polymer(s)
No relevant data found.

Residual monomers
No relevant data found.

Mutagenicity

Not classified due to lack of data.

Information for the Product:

Based on testing for product(s) in this family of materials: In vitro genetic toxicity studies were negative.

Information for components:

Acrylic polymer(s)
No relevant data found.

Residual monomers
No relevant data found.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data are available.

Toxicity

Acrylic polymer(s)

Acute toxicity to fish
No relevant data found.

Residual monomers

Acute toxicity to fish
No relevant data found.

Persistence and degradability

Acrylic polymer(s)

Biodegradability: No relevant data found.

Residual monomers

Biodegradability: No relevant data found.

Bioaccumulative potential

Acrylic polymer(s)

Bioaccumulation: No relevant data found.

Residual monomers

Bioaccumulation: No relevant data found.

Mobility in soil

Acrylic polymer(s)
No relevant data found.

Residual monomers
No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

Contaminated packaging: Empty containers may retain product residues and should be disposed of by an approved waste management facility. Label warnings should be followed even after container is emptied. Improper disposal or reuse of this container may be dangerous and illegal. Consult with the respective regulating authorities to determine the available treatment and disposal facilities. All disposal practices must be in compliance with Federal, State/Provincial and local regulations.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
No SARA Hazards

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania
Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

California Prop. 65
This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
HMIS

Health	Flammability	Physical Hazard
1	0	0

Revision
Identification Number: 10076532 / A001 / Issue Date: 05/31/2024 / Version: 4.0

In case this version of the SDS contains significant changes from the previous version, they are listed below. If no significant changes are displayed, then no significant changes occurred.
Changes encompass identification, hazards, tox/eco-tox information and the addition/removal of the ingredients, and regulatory information, hazard information, uses, risk management measures and other key regulatory changes of the product. Detailed explanation of the changes can be obtained upon request.

Full text of other abbreviations
AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US

SAFETY DATA SHEET

Issue Date: 10/15/2016

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Name	No Lap Bands - Coated & Nonwoven
1.2 Product Use	For grinding and sanding of different kinds of materials. (Abrasives breakdown during use. OSHA classifies this as inert or nuisance dust.)
1.3 Manufacturer or Supplier Details	
Company	ARC Abrasives, Inc.
Address	2131 Corporate Drive, Troy OH 45373
Telephone	(937) 335-5607
Fax	(937) 339-4969
Web	www.arcabrasives.com

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification	Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200.
2.2 Hazards to Humans	N/A
2.3 Hazards to the Environment	N/A
2.4 Physical or Chemical Hazards	N/A

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Products vary in composition and are comprised of only some of the ingredients listed below

Chemical Name	Concentration	CAS No.
Aluminum Oxide	0-52	1344-28-1
Silicon Carbide	0-50	409-21-2
Zirconium Oxide	0-30	1314-23-4
Kaolin Clay	0-15	1332-58-7
Lubricant	0-5	N/A
Nylon Fiber	0-50	N/A
Cured Resin*	0-40	N/A
Cured Adhesive*	0-40	N/A
Filler*	0-15	N/A
Backing	0-60	N/A

(*) Denotes mixture. The specific identity and/or exact concentration of any ingredient is withheld as a trade secret.

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures	
Inhalation	Remove to fresh air. Apply artificial respiration if necessary. Obtain medical assistance if needed.
Ingestion	If sanding dust is swallowed, seek medical attention.
Eye Contact	Flush eyes thouroughly with water. Seek medical assistance if irritation persists.
Skin Contact	No adverse effects by contact are known. Wash dust from skin with soap and water.
4.2 Most important symptoms and effects, both acute and delayed	Fibers/dust can cause eye and respitory irritation.
4.3 Indication of any immediate medical attention and special treatment needed	Not relevant. Treat symptomatically.

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SECTION 5 - FIRE FIGHTING METHODS

5.1 Suitable extinguishable media — Product is non-combustable. Use a firefighting agent such as water or foam, according to your environment.

5.2 Special hazards arising from substance or mixture — There are no inherent hazards associated with this product.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions — Use appropriate PPE when using this product.

6.2 Environmental precautions — Avoid release into the environment.

6.3 Methods for containment or cleanup — Clean up and dispose of with normal clean up procedures.

SECTION 7 - HANDLING AND STORAGE

7.1 Handling — Provide adequate ventilation. Avoid generation of dust. Avoid breathing the dust. Wear appropriate protective equipment. Refer to OSHA's substance specific standards for additional work practice requirements.

7.2 Storage — Store in a dry location.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Occupational exposure limits

"Component"	OSHA PEL	ACGIH TLV
Aluminum Oxide	15mg/m^3	10mg/m^3
Silicon Carbide	15mg/m^3	10mg/m^3
Zirconium Oxide	15mg/m^3	10mg/m^3
Kaolin Clay	15mg/m^3	10mg/m^3
Lubricant	None established	None established
Nylon Fiber	None established	None established
Cured Resin	None established	None established
Cured Adhesive	None established	None established
Filler	None established	None established
Backing	None established	None established

8.2 Personal protection requirements and referrals

Respiratory protection — As needed, approved dust respitory OSHA CRF 1910.134.

Hand protection — Wear appropriate gloves to minimize risk of injury to skin from contact with dust, or physical abrasion from grinding or sanding.

Eye protection — Ref. OSHA 29 CRF 1910.133 (Face and Eye Protection).

Hearing protection — As needed, Ref. OSHA 29 CRF 1910.125 (Hearing Protection).

Body protection — As needed.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form — Solid

Color — Varies

Odor — No data available

Odor threshold — No data available

pH value — No data available

Melting/freezing point — No data available

Initial boiling point — No data available

Flash point/range — No data available

Evaporation rate — No data available

Flammability — No data available

Explosion limits — No data available

SECTION 9 (Continued)

Vapor pressure	No data available
Vapor density	No data available
Density	No data available
Solubility	No data available
Partition coefficient: n-octonal	No data available
Auto-ignition temperature	No data available
Thermal decomposition	No data available
Additional information	No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity	This product is not considered to be reactive under normal conditions.
10.2 Chemical stability	Stable.
10.3 Possibility of hazardous reaction	Not known.
10.4 Conditions to avoid	Not known.
10.5 Incombatible materials	Not known.
10.6 Hazardous decompositions/products	Not known.

Under normal usage, hazardous decomposition of products are not expected.

SECTION 11 - TOXILOGICAL INFORMATION

11.1 Inhalation	Dust from grinding, sanding, or machining may cause irritation of the respitory system. Signs or symptoms include cough, sneezzing, nasal discharge, headache, hoarseness, nose pain, and throat pain.
11.2 Eye contact	Corneal abrasion, pain, redness, and tearing may be signs or symptoms from mechanical eye irritation. Dust created by grinding, sanding, or machining can also cause eye irritation.
11.3 Skin contact	Mechanical skin irritation. Signs or symptoms include abrasion, redness, pain, and itching.
11.4 Ingestion	No known health effects.
11.5 Carcinogenicity	None of the components are listed as a potential carcinogen by OSHA, NTP, or IARC.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Ecological information	It is not expected that this product is hazardous to the environment. Ecotoxicity data is not available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste disposal method	Dispose of in accordance with all applicable local, state, and federal regulations. It is the responibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

SECTION 14 - TRANSPORT INFORMATION

14.1 Transportation information	This product is not regulated per the U.S. DOT, IATA, TDG,or IMO.

SECTION 15 - REGULATORY INFORMATION

15.1 Hazard categories	None
15.2 Safety, health and environmental regulations for the substance	This product is and article as defined by TSCA (EPA US) regulations, and is exempt from TSCA inventory listing requirements.

SECTION 16 - OTHER INFORMATION

16.1 Disclaimer/Statement of Liability	The information provided in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. This information, and the recommendations regarding the application and end use of this product, are given in good faith based on current knowledge and test data. ARC ABRASIVES makes no warranty with the respect to the accuracy of this information of the suitability of these recommendations, and assumes no liability to any user thereof. It is the users responsibility to determine if this product is fit for a particular purpose, and suitable for the user's method of use and/or application.
16.2 Date Created	10/15/2016
16.3 Revision Number	01
16.4 Revision Date	10/15/2016

SAFETY DATA SHEET

Issue Date: 10/15/2016

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Name	Quick-Lok Discs - Coated & Nonwoven
1.2 Product Use	For grinding and sanding of different kinds of materials. (Abrasives breakdown during use. OSHA classifies this as inert or nuisance dust.)
1.3 Manufacturer or Supplier Details	
Company	ARC Abrasives, Inc.
Address	2131 Corporate Drive, Troy OH 45373
Telephone	(937) 335-5607
Fax	(937) 339-4969
Web	www.arcabrasives.com

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification	Not classified as hazardous according to OSHA Hazard communication Standard 29 CFR 1910.1200.
2.2 Hazards to Humans	N/A
2.3 Hazards to the Environment	N/A
2.4 Physical or Chemical Hazards	N/A

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Products vary in composition and are comprised of only some of the ingredients listed below

Chemical Name	Concentration	CAS No.
Aluminum Oxide	0-52	1344-28-1
Silicon Carbide	0-50	409-21-2
Limestone	0-25	1317-65-3
Garnet	0-30	12178-41-5
Zirconium Oxide	0-30	1314-23-4
Alumina Zirconia	0-30	68995-26-0
Kaolin Clay	0-15	1332-58-7
Calcium Stearate	0-10	1592-23-0
Zinc Sulfate	0-10	557-05-1
Calcium Sulfate	0-5	7778-18-9
Potassium Fluorobonate	0-5	14075-53-7
Meg	0-5	107-21-1
Crystalline Silica	0.1-1	14808-60-7
Cryolite	0-10	N/A
Lubricant	0-5	N/A
Nylon Fiber	0-50	N/A
Cured Resin*	0-40	N/A
Adhesive*	0-40	N/A
Filler*	0-15	N/A
Plastic Button	0-15	N/A
Metal Button	0-15	N/A
Wax	0-25	N/A

(*) Denotes mixture. The specific identity and/or exact concentration of any ingredient is withheld as a trade secret.

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove to fresh air. Apply artificial respiration if necessary. Obtain medical assistance if needed.
Ingestion	If sanding dust is swallowed, seek medical attention.
Eye Contact	Flush eyes thouroughly with water. Seek medical assistance if irritation persists.
Skin Contact	No adverse effects by contact are known. Wash dust from skin with soap and water.

4.2 Most important symptoms and effects, both acute and delayed — Fibers/dust can cause eye and respitory irritation.

4.3 Indication of any immediate medical attention and special treatment needed — Not relevant. Treat symptomatically.

SECTION 5 - FIRE FIGHTING METHODS

5.1 Suitable extinguishable media — Product is non-combustable. Use a firefighting agent such as water or foam, according to your environment.

5.2 Special hazards arising from substance or mixture — There are no inherent hazards associated with this product.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions — Use appropriate PPE when using this product.

6.2 Environmental precautions — Avoid release into the environment.

6.3 Methods for containment or cleanup — Clean up and dispose of with normal clean up procedures.

SECTION 7 - HANDLING AND STORAGE

7.1 Handling — Provide adequate ventilation. Avoid generation of dust. Avoid breathing the dust. Wear appropriate protective equipment. Refer to OSHA's substance specific standards for additional work practice requirements.

7.2 Storage — Store in a dry location.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Occupational exposure limits

"Component"	OSHA PEL	ACGIH TLV
Aluminum Oxide	15mg/m^3	10mg/m^3
Silicon Carbide	15mg/m^3	10mg/m^3
Limestone	15mg/m^3	10mg/m^3
Garnet	None established	None established
Zirconium Oxide	5mg/m^3	3mg/m^3
Alumina Zirconia	15mg/m^3	10mg/m^3
Kaolin Clay	15mg/m^3	10mg/m^3
Calcium Stearate	None established	None established
Zinc Sulfate	10mg/m^3	5mg/m^3
Calcium Sulfate	15mg/m^3	10mg/m^3
Potassium Fluorobonate	2.5mg/m^3	2.5mg/m^3
Meg	None established	None established
Crystalline Silica	10mg/m^3	5mg/m^3
Cryolite	2mg/m^3	2.5mg/m^3
Lubricant	None established	None established
Nylon Fiber	None established	None established
Cured Resin	None established	None established
Cured Adhesive	None established	None established
Filler	None established	None established
Plastic Button	None established	None established
Metal Button	None established	None established
Wax	None established	None established

SECTION 8 (Continued)

8.2 Personal protection requirements and referrals

Respiratory protection	As needed, approved dust respitory OSHA CRF 1910.134.
Hand protection	Wear appropriate gloves to minimize risk of injury to skin from contact with dust, or physical abrasion from grinding or sanding.
Eye protection	Ref. OSHA 29 CRF 1910.133 (Face and Eye Protection).
Hearing protection	As needed, Ref. OSHA 29 CRF 1910.125 (Hearing Protection).
Body protection	As needed.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	Solid
Color	Varies
Odor	No data available
Odor threshold	No data available
pH value	No data available
Melting/freezing point	No data available
Initial boiling point	No data available
Flash point/range	No data available
Evaporation rate	No data available
Flammability	No data available
Explosion limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Density	No data available
Solubility	No data available
Partition coefficient: n-octonal	No data available
Auto-ignition temperature	No data available
Thermal decomposition	No data available
Additional information	No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity	This product is not considered to be reactive under normal conditions.
10.2 Chemical stability	Stable.
10.3 Possibility of hazardous reaction	Not known.
10.4 Conditions to avoid	Not known.
10.5 Incombatible materials	Not known.
10.6 Hazardous decompositions/products	Not known.

Under normal usage, hazardous decomposition of products are not expected.

SECTION 11 - TOXILOGICAL INFORMATION

11.1 Inhalation	Dust from grinding, sanding, or machining may cause irritation of the respitory system. Signs or symptoms include cough, sneezzing, nasal discharge, headache, hoarseness, nose pain, and throat pain.
11.2 Eye contact	Corneal abrasion, pain, redness, and tearing may be signs or symptoms from mechanical eye irritation. Dust created by grinding, sanding, or machining can also cause eye irritation.
11.3 Skin contact	Mechanical skin irritation. Signs or symptoms include abrasion, redness, pain, and itching.
11.4 Ingestion	No known health effects.
11.5 Carcinogenicity	None of the components are listed as a potential carcinogen by OSHA, NTP, or IARC.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Ecological information	It is not expected that this product is hazardous to the environment. Ecotoxicity data is not available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste disposal method	Dispose of in accordance with all applicable local, state, and federal regulations. It is the responibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

SECTION 14 - TRANSPORT INFORMATION

14.1 Transportation information	This product is not regulated per the U.S. DOT, IATA, TDG,or IMO.

SECTION 15 - REGULATORY INFORMATION

15.1 Hazard categories	None
15.2 Safety, health and environmental regulations for the substance	This product is and article as defined by TSCA (EPA US) regulations, and is exempt from TSCA inventory listing requirements.

SECTION 16 - OTHER INFORMATION

16.1 Disclaimer/Statement of Liability	The information provided in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. This information, and the recommendations regarding the application and end use of this product, are given in good faith based on current knowledge and test data. ARC ABRASIVES makes no warranty with the respect to the accuracy of this information of the suitability of these recommendations, and assumes no liability to any user thereof. It is the users responsibility to determine if this product is fit for a particular purpose, and suitable for the user's method of use and/or application.
16.2 Date Created	10/15/2016
16.3 Revision Number	01
16.4 Revision Date	10/15/2016

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

1 Identification of the substance and manufacturer

Trade name: PNT13-22 GLOSS WHITE

Product code: AT00130022
Product category PC9a Paints and coatings.
Manufacturer/Supplier: Aurora/Propar
500 South Enterprise Boulevard
Lebanon, IN 46052
phone: 1-800-621-7949
www.auroraparts.com
Emergency telephone number: CHEMTEL 1-800-255-3924, or 813-248-0585.

2 Hazard(s) identification

Classification of the substance or mixture

Flam. Aerosol 1 H222 Extremely flammable aerosol.
Press. Gas H280 Contains gas under pressure; may explode if heated.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS Hazard pictograms



GHS02 GHS04 GHS07 GHS08

Signal word Danger
Hazard statements
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapors/spray.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Protect from sunlight. Store in a well-ventilated place.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

Chemical characterization: Mixtures
Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
67-64-1	Acetone	16.83%
74-98-6	propane	15.74%
13463-67-7	titanium dioxide	11.35%
110-19-0	Isobutyl Acetate	9.32%
106-97-8	n-butane	9.24%
2807-30-9	Glycol Ether EP	6.03%
7727-43-7	barium sulfate, natural	5.53%
123-86-4	n-butyl acetate	3.06%
107-87-9	Methyl Propyl Ketone	1.66%
108-10-1	methyl isobutyl ketone	1.42%

4 First-aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Remove contaminated clothing. Wash exposed area with soap and water.
After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: Rinse out mouth and then drink plenty of water.

(Contd. on page 2)

Safety Data Sheet

Trade name: PNT13-22 GLOSS WHITE

(Contd. of page 1)

Rinse mouth with water. Do not induce vomiting.

Most important symptoms and effects: Dizziness

Indication of any immediate medical attention needed: No further relevant information available.

5 Fire-fighting measures

Extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.

Special hazards: Can form explosive gas-air mixtures.

Protective equipment for firefighters: A respiratory protective device may be necessary.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.

Methods and material for containment and cleaning up: Ensure adequate ventilation.

7 Handling and storage

Precautions for safe handling Use only in well ventilated areas.

Storage requirements: Keep away from sources of heat and direct sunlight. Do not warehouse in subfreezing conditions. Store locked up.

8 Exposure controls/personal protection

Components with limit values that require monitoring at the workplace:	
67-64-1 Acetone	
PEL (USA)	Long-term value: 2400 mg/m³, 1000 ppm
REL (USA)	Long-term value: 590 mg/m³, 250 ppm
TLV (USA)	Short-term value: 1187 mg/m³, 500 ppm Long-term value: 594 mg/m³, 250 ppm BEI
74-98-6 propane	
PEL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
REL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
TLV (USA)	refer to Appendix F inTLVs&BEIs book; NIC-EX
110-19-0 Isobutyl Acetate	
PEL (USA)	Long-term value: 700 mg/m³, 150 ppm
REL (USA)	Long-term value: 700 mg/m³, 150 ppm
TLV (USA)	Short-term value: 172 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
106-97-8 n-butane	
REL (USA)	Long-term value: 1900 mg/m³, 800 ppm
TLV (USA)	Short-term value: (2370) mg/m³, (1000) ppm NIC-EX
7727-43-7 barium sulfate, natural	
PEL (USA)	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV (USA)	Long-term value: 5* mg/m³ *inhalable fraction; E
123-86-4 n-butyl acetate	
PEL (USA)	Long-term value: 710 mg/m³, 150 ppm
REL (USA)	Short-term value: 950 mg/m³, 200 ppm Long-term value: 710 mg/m³, 150 ppm
TLV (USA)	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
107-87-9 Methyl Propyl Ketone	
PEL (USA)	Long-term value: 700 mg/m³, 200 ppm
REL (USA)	Long-term value: 530 mg/m³, 150 ppm
TLV (USA)	Short-term value: 529 mg/m³, 150 ppm

(Contd. on page 3)

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

Trade name: PNT13-22 GLOSS WHITE

(Contd. of page 2)

108-10-1 methyl isobutyl ketone	
PEL (USA)	Long-term value: 410 mg/m³, 100 ppm
REL (USA)	Short-term value: 300 mg/m³, 75 ppm Long-term value: 205 mg/m³, 50 ppm
TLV (USA)	Short-term value: 307 mg/m³, 75 ppm Long-term value: 82 mg/m³, 20 ppm BEI

Ingredients with biological limit values:	
67-64-1 Acetone	
BEI (USA)	50 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)
108-10-1 methyl isobutyl ketone	
BEI (USA)	1 mg/L Medium: urine Time: end of shift Parameter: MIBK

Hygienic protection: Keep away from foodstuffs and animal feed. Wash hands after use.
Immediately remove all soiled and contaminated clothing.
Wash hands after use.
Avoid contact with the eyes and skin.
Do not eat or drink while working.

Breathing equipment: A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygeine.

Hand protection: Nitrile gloves.
Protective gloves. The glove material must be impermeable and resistant to the substance.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Appearance: Aerosol.
Odor: Aromatic
Odor threshold: Not determined.

pH-value: Not determined.
Melting point/Melting range Undetermined.
Boiling point: -44 °C (-47 °F)

Flash point: -19 °C (-2 °F)
Flammability (solid, gas): Extremely flammable.

Decomposition temperature: Not determined.

Auto igniting: Product is not self-igniting.

Danger of explosion: In use, may form flammable/explosive vapour-air mixture.
Lower Explosion Limit: 1.7 Vol %
Upper Explosion Limit: 10.9 Vol %

Vapor pressure: Not determined.
Relative Density: Between 0.77 and 0.85 (Water equals 1.00)
Vapor density Not determined.
Evaporation rate Not applicable.
Partition coefficient: n-octonal/water: Not determined.

Solubility: Not determined.
Viscosity: Not determined.
VOC content (less exempt solvents): 47.6 %

Solids content: 35.0 %

10 Stability and reactivity

Reactivity: Stable at normal temperatures.
Conditions to avoid: Do not allow can to exceed 120 degrees Fahrenheit. Do not warehouse in subfreezing temperatures.
Chemical stability: Not fully evaluated.
Possibility of hazardous reactions: No dangerous reactions known.
Incompatible materials: No further relevant information available.
Hazardous decomposition: No dangerous decomposition products known.

(Contd. on page 4)

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

Trade name: PNT13-22 GLOSS WHITE

(Contd. of page 3)

11 Toxicological information

LD/LC50 values that are relevant for classification:		
13463-67-7 titanium dioxide		
Oral	LD50	>20000 mg/kg (rat)
Dermal	LD50	>10000 mg/kg (rbt)
Inhalative	LC50/4 h	>6.82 mg/l (rat)
110-19-0 Isobutyl Acetate		
Oral	LD50	4763 mg/kg (rbt)
106-97-8 n-butane		
Inhalative	LC50/4 h	658 mg/l (rat)
123-86-4 n-butyl acetate		
Oral	LD50	14000 mg/kg (rat)
Inhalative	LC50/4 h	>21.0 mg/l (rat)
108-10-1 methyl isobutyl ketone		
Oral	LD50	2100 mg/kg (rat)
Dermal	LD50	16000 mg/kg (rab)
Inhalative	LC50/4 h	8.3-16.6 mg/l (rat)

Information on toxicological effects: No data available.
Skin effects: No irritant effect.
Eye effects: Irritating effect.
Sensitization: No sensitizing effects known.

12 Ecological information

Aquatic toxicity: Hazardous for water, do not empty into drains.
Persistence and degradability: The product is degradable after prolonged exposure to natural weathering processes.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Other adverse effects: No further relevant information available.

13 Disposal considerations

Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.
Recommendation: Completely empty cans should be recycled.

14 Transport information

UN-Number UN1950
DOT N/A
DOT Consumer Commodity ORM-D
Aerosols, flammable
ADR 1950 Aerosols
Transport hazard class(es):
Class 2.1
Marine pollutant: No
Special precautions for user: Warning: Gases
EMS Number: F-D,S-U
Quantity limitations On passenger aircraft/rail: 75 kg
On cargo aircraft only: 150 kg

ADR
Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

IMDG

Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity
Packaging Group: --
UN "Model Regulation": UN1950, Aerosols, 2.1

15 Regulatory information

SARA Section 355 (extremely hazardous substances):
None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):	
7727-43-7	barium sulfate, natural

(Contd. on page 5)

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

Trade name: PNT13-22 GLOSS WHITE

(Contd. of page 4)

108-10-1	methyl isobutyl ketone

Toxic Substances Control Act (TSCA): All ingredients for this product are found on the inventory list of substances.

Consumer Product Safety Comission (CPSC): This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

California Proposition 65 chemicals known to cause cancer:	
13463-67-7	titanium dioxide
108-10-1	methyl isobutyl ketone
100-41-4	ethyl benzene

California Proposition 65 chemicals known to cause birth defects or reproductive harm:	
108-10-1	methyl isobutyl ketone

CANADIAN ENVIRONMENTAL PROTECTION ACT: All hazardous ingredients for this product appear on the Canadian Domestice Substance List.

WHMIS Symbols for Canada: A - Compressed gas
D2B - Toxic material causing other toxic effects



EPA:		
67-64-1	Acetone	I
110-19-0	Isobutyl Acetate	D
7727-43-7	barium sulfate, natural	D, CBD(inh), NL(oral)
108-10-1	methyl isobutyl ketone	I

16 Other information

Contact: Regulatory Affairs
Date of preparation / last revision 02/20/2017 / -

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

1 Identification of the substance and manufacturer

Trade name: PNT3-1 GLOSS BLACK

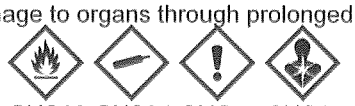
Product code: AT00030001
Product category PC9a Paints and coatings.
Manufacturer/Supplier: Aurora/Propar
500 South Enterprise Boulevard
Lebanon, IN 46052
phone: 1-800-621-7949
www.auroraparts.com
Emergency telephone number: CHEMTEL 1-800-255-3924, or 813-248-0585.

2 Hazard(s) identification

Classification of the substance or mixture

Flam. Aerosol 1 H222 Extremely flammable aerosol.
Press. Gas H280 Contains gas under pressure; may explode if heated.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS Hazard pictograms



GHS02 GHS04 GHS07 GHS08

Signal word Danger
Hazard statements
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapors/spray.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Protect from sunlight. Store in a well-ventilated place.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

Chemical characterization: Mixtures
Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
67-64-1	Acetone	21.58%
74-98-6	propane	15.75%
106-97-8	n-butane	9.25%
7727-43-7	barium sulfate, natural	9.17%
2807-30-9	Glycol Ether EP	6.88%
110-19-0	Isobutyl Acetate	6.82%
123-86-4	n-butyl acetate	3.78%
108-65-6	PM acetate	1.89%
107-87-9	Methyl Propyl Ketone	1.47%

4 First-aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Remove contaminated clothing. Wash exposed area with soap and water.
After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: Rinse out mouth and then drink plenty of water.
Rinse mouth with water. Do not induce vomiting.

(Contd. on page 2)

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

Trade name: PNT3-1 GLOSS BLACK

(Contd. of page 1)

Most important symptoms and effects: Dizziness

Indication of any immediate medical attention needed: No further relevant information available.

5 Fire-fighting measures

Extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.

Special hazards: Can form explosive gas-air mixtures.

Protective equipment for firefighters: A respiratory protective device may be necessary.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.

Methods and material for containment and cleaning up: Ensure adequate ventilation.

7 Handling and storage

Precautions for safe handling Use only in well ventilated areas.

Storage requirements: Keep away from sources of heat and direct sunlight. Do not warehouse in subfreezing conditions. Store locked up.

8 Exposure controls/personal protection

Components with limit values that require monitoring at the workplace:	
67-64-1 Acetone	
PEL (USA)	Long-term value: 2400 mg/m³, 1000 ppm
REL (USA)	Long-term value: 590 mg/m³, 250 ppm
TLV (USA)	Short-term value: 1187 mg/m³, 500 ppm Long-term value: 594 mg/m³, 250 ppm BEI
74-98-6 propane	
PEL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
REL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
TLV (USA)	refer to Appendix F inTLVs&BEIs book; NIC-EX
106-97-8 n-butane	
REL (USA)	Long-term value: 1900 mg/m³, 800 ppm
TLV (USA)	Short-term value: (2370) mg/m³, (1000) ppm NIC-EX
7727-43-7 barium sulfate, natural	
PEL (USA)	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV (USA)	Long-term value: 5* mg/m³ *inhalable fraction; E
110-19-0 Isobutyl Acetate	
PEL (USA)	Long-term value: 700 mg/m³, 150 ppm
REL (USA)	Long-term value: 700 mg/m³, 150 ppm
TLV (USA)	Short-term value: 172 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
123-86-4 n-butyl acetate	
PEL (USA)	Long-term value: 710 mg/m³, 150 ppm
REL (USA)	Short-term value: 950 mg/m³, 200 ppm Long-term value: 710 mg/m³, 150 ppm
TLV (USA)	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
108-65-6 PM acetate	
WEEL (USA)	Long-term value: 50 ppm
107-87-9 Methyl Propyl Ketone	
PEL (USA)	Long-term value: 700 mg/m³, 200 ppm
REL (USA)	Long-term value: 530 mg/m³, 150 ppm

(Contd. on page 3)

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

Trade name: PNT3-1 GLOSS BLACK

(Contd. of page 2)

TLV (USA)	Short-term value: 529 mg/m³, 150 ppm

Ingredients with biological limit values:	
67-64-1 Acetone	
BEI (USA)	50 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)

Hygienic protection: Keep away from foodstuffs and animal feed. Wash hands after use.
Immediately remove all soiled and contaminated clothing.
Wash hands after use.
Avoid contact with the eyes and skin.
Do not eat or drink while working.

Breathing equipment: A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygeine.

Hand protection: Nitrile gloves.
Protective gloves. The glove material must be impermeable and resistant to the substance.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Appearance: Aerosol.
Odor: Aromatic
Odor threshold: Not determined.

pH-value: Not determined.
Melting point/Melting range Undetermined.
Boiling point: -44 °C (-47 °F)

Flash point: -19 °C (-2 °F)
Flammability (solid, gas): Extremely flammable.

Decomposition temperature: Not determined.

Auto igniting: Product is not self-igniting.

Danger of explosion: In use, may form flammable/explosive vapour-air mixture.
Lower Explosion Limit: 1.7 Vol %
Upper Explosion Limit: 10.9 Vol %

Vapor pressure: Not determined.
Relative Density: Between 0.77 and 0.85 (Water equals 1.00)
Vapor density Not determined.
Evaporation rate Not applicable.
Partition coefficient: n-octonal/water: Not determined.

Solubility: Not determined.
Viscosity: Not determined.
VOC content (less exempt solvents): 47.9 %

Solids content: 30.2 %

10 Stability and reactivity

Reactivity: Stable at normal temperatures.
Conditions to avoid: Do not allow can to exceed 120 degrees Fahrenheit. Do not warehouse in subfreezing temperatures.
Chemical stability: Not fully evaluated.
Possibility of hazardous reactions: No dangerous reactions known.
Incompatible materials: No further relevant information available.
Hazardous decomposition: No dangerous decomposition products known.

11 Toxicological information

LD/LC50 values that are relevant for classification:		
106-97-8 n-butane		
Inhalative	LC50/4 h	658 mg/l (rat)
110-19-0 Isobutyl Acetate		
Oral	LD50	4763 mg/kg (rbt)
123-86-4 n-butyl acetate		
Oral	LD50	14000 mg/kg (rat)
Inhalative	LC50/4 h	>21.0 mg/l (rat)

(Contd. on page 4)

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

Trade name: PNT3-1 GLOSS BLACK

(Contd. of page 3)

108-65-6 PM acetate		
Oral	LD50	8500 mg/kg (rat)
Inhalative	LC50/4 h	35.7 mg/l (rat)

Information on toxicological effects: No data available.
Skin effects: No irritant effect.
Eye effects: Irritating effect.
Sensitization: No sensitizing effects known.

12 Ecological information

Aquatic toxicity: Hazardous for water, do not empty into drains.
Persistence and degradability: The product is degradable after prolonged exposure to natural weathering processes.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Other adverse effects: No further relevant information available.

13 Disposal considerations

Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.
Recommendation: Completely empty cans should be recycled.

14 Transport information

UN-Number UN1950
DOT N/A
DOT Consumer Commodity ORM-D
Aerosols, flammable
ADR 1950 Aerosols
Transport hazard class(es):
Class 2.1
Marine pollutant: No
Special precautions for user: Warning: Gases
EMS Number: F-D,S-U
Quantity limitations On passenger aircraft/rail: 75 kg
On cargo aircraft only: 150 kg

ADR
Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

IMDG
Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity
Packaging Group: --
UN "Model Regulation": UN1950, Aerosols, 2.1

15 Regulatory information

SARA Section 355 (extremely hazardous substances):
None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

7727-43-7	barium sulfate, natural

Toxic Substances Control Act (TSCA): All ingredients for this product are found on the inventory list of substances.
Consumer Product Safety Comission (CPSC): This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

California Proposition 65 chemicals known to cause cancer:

108-10-1	methyl isobutyl ketone
1333-86-4	Carbon black
100-41-4	ethyl benzene

California Proposition 65 chemicals known to cause birth defects or reproductive harm:

108-10-1	methyl isobutyl ketone

CANADIAN ENVIRONMENTAL PROTECTION ACT: All hazardous ingredients for this product appear on the Canadian Domestice Substance List.
WHMIS Symbols for Canada: A - Compressed gas

(Contd. on page 5)

Safety Data Sheet

Printing date 02/20/2017 Revised On 01/24/2017

Trade name: PNT3-1 GLOSS BLACK

(Contd. of page 4)

D2B - Toxic material causing other toxic effects



EPA:		
67-64-1	Acetone	I
7727-43-7	barium sulfate, natural	D, CBD(inh), NL(oral)
110-19-0	Isobutyl Acetate	D

16 Other information

Contact: Regulatory Affairs
Date of preparation / last revision 02/20/2017 / -

SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519

Product name： SPRAY PAINT - GOLD (PMSPG)	**SDS No.：** EN21134
Revision date： 2024-08-13	**Version #：** V3.0
UFI Number： 2720-10MN-3000-MYSC	

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER

Product name: Auto Choice Spray Paint - Gold
Product code: PMSPG

1.2 USES AND USES ADVISED AGAINST

Use(s): Paint and coating applications.
Main Intended Use(s): PC-PNT-1 Aerosol paints and coatings

1.3 DETAILS OF THE SUPPLIER OF THE PRODUCT

Supplier name: PM Distribution Ltd
Address: 3 Glenford Road, Newtownards, BT23 4AU
Telephone: 028 9181 1130
Website: www.autochoicedirect.co.uk

1.4 Emergency telephone number(s)

Emergency: 028 9181 1130

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Flammable aerosol.
Contents under pressure.
Pressurised container may rupture when exposed to heat or flame.
May be fatal if swallowed and enters airways.
May cause genetic defects.

FRS SDS Reference Library | S011 | Library page 98

Dangerous for the environment if discharged into watercourses.

2.2 HAZARD CATEGORIES

Aerosols: Category 1
Aspiration hazard: Category 1
Acute toxicity, dermal: Category 5
Gem cell mutagenicity: Category 1B
Hazardous to the aquatic environment, acute hazard: Category 1
Hazardous to the aquatic environment, long-term hazard: Category 3

2.3 LABEL ELEMENTS

Pictograms



Signal word

Danger

Hazard statement

H223 Flammable aerosol.
H229 Pressurised container: may burst if heated.
H313 May be harmful in contact with skin.
H340 May cause genetic defects.
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with lasting effects.

Precautionary statement

【Prevention】

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/spark/open flames/hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.

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P251 Do not pierce or burn, even after use.
P280 Wear protective gloves/protective clothing /eye protection/face protection
P273 Avoid release to the environment.

【Response】

P301+P310 IF SWOLLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P308+P313 If exposed or concerned: Get medical advice/attention.
P312 Call a POISON CENTER/doctor if you feel unwell
P391 Collect spillage.

【Storage】

P405 Store locked up.
P410+P412 Protect from sunlight. Do not expose to temperature exceeding 50°C/122°F.

【Disposal】

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Physical and chemical hazards

Flammable aerosol. The product is stable and non-reactive under normal conditions of use, storage and transport.

Health hazards

Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. May be harmful in contact with skin. Prolonged inhalation may be harmful.

Environment hazards

Toxic to aquatic life with lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture Mixture

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Substance/mixture	Concentration （%）	CAS No.
DIMETHYL ETHER	>30 - <40% (v/v)	115-10-6
ACRYLIC RESIN	>10 - <15% (v/v)	25035-69-2
TOLUENE	>10 - <15% (v/v)	108-88-3
ETHYL ACETATE	>10 - <15% (v/v)	141-78-6
METHYL ACETATE	>10 - <15% (v/v)	79-20-9
COPPER	>5 - <8% (v/v)	7440-50-8

4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact: Wash off with soap and water. Get medical advice/attention if you feel unwell.
Eye contact: Rinse with water. Get medical attention if irritation develops and persists.
Ingestion: Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

See Section 11 for more detailed information on health effects and symptoms.

4.3 PERSONAL PROTECTION EQUIPMENT FOR FIRST AID RESPONDERS

If exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this Safety Data Sheet to the doctor in attendance.

4.4 SPECIAL NOTES TO PHYSICIAN

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptom may be delayed.

5. FIRE FIGHTING MEASURES

FRS SDS Reference Library | S011 | Library page 101

5.1 SPECIFIC HAZARDS

Flammable. May evolve toxic gases(Carbon oxide, hydrogen chloride, phosgene, hydrocarbons) when heated to decomposition. Vapour may explosive mixtures with air. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, etc when handling. Aerosol cans may explode at temperature above 50°C.

5.2 EXTINGUISING MEDIA

Water fog. Foam. Dry chemical power. Carbon dioxide(CO_2). Prevent contamination of drains and waterways.

5.3 SPECIAL FIRE FIGHTING PROCEDURES

Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapour pressure build up.

5.4 PROTECTION OF FIRE FIGHTERS

Fire-fighters must be use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

6.2 Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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6.3 Clean-up methods and materials and containment measures

Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

7.1 HANDLING

Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or detective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handing. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

7.2 STORAGE

Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C/ 122°F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other

sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials(see section 10 of the SDS).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure limits

FRS SDS Reference Library | S011 | Library page 103

China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents(GBZ 2.1-2007)

Components	Cas No.	TWA	STEL
		mg/m³	mg/m³
Dimethyl ether	115-10-6	1000	1500
Ethyl Acetate	141-78-6	200	300
Methyl Acetate	79-20-9	200	500
Toluene	108-88-3	50	100

BIOLOGICAL LIMIT VALUE

No biological exposure limits noted for the ingredients.

MONITORING METHODS

Follow standard monitoring procedures.

8.2 ENGINEERING MEASURES

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels to an acceptable level.

8.3 RESPIRATORY PROTECTION

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapour cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies.

8.4 EYE PROTECTION

Wear safety glasses with side shields(or goggles).

8.5 SKIN AND BODY PROTECTION

Wear appropriate chemical resistant clothing.

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8.6 HAND PROTECTION

Wear protective gloves such as: Nitrile. Neoprene

8.7 HYGIENE MEASURES

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handing the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	LIQUID		
Odor	SOLVENT ODOUR	**pH**	NOT AVAILABLE
Odor threshold	NOT AVAILABLE	**Boiling point**	NOT AVAILABLE
Melting point	NOT AVAILABLE	**Flash point**	<23°C(PROPELLANT)
Evaporation rate	NOT AVAILABLE	**Flammability**	FLAMMABLE
Upper explosion limit	NOT AVAILABLE	**Lower explosion limit**	NOT AVAILABLE
Vapour density (air=1)	>1	**Specific gravity**	1.1
Solubility(water)	INSOLUBLE	**Vapour pressure**	NOT AVAILABLE
Auto ignition temperature	NOT AVAILABLE	**Decomposition temperature**	NOT AVAILABLE
Viscosity	NOT AVAILABLE	**Explosive properties**	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE		

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9.2 Other information

% Volatiles 100%

10. STABILITY AND REACTIVITY

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Stability

Material is stable under normal conditions.

10.3 Incompatible materials

Strong oxidising agents. Acids.

10.4 Conditions to avoid

Heat. Spark. Flame. Ignition sources.

10.5 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.6 Hazardous decomposition products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

Harmful if swallowed, in contact with skin, and/or if inhaled.

Components	CAS No.	LD50 （Oral）	LD50 （Dermal）	LC50 (Inhalation）
Ethyl Acetate	141-78-6	5620mg/kg （Rat）	No data provided.	No data provided.

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Methyl Acetate	79-20-9	5000mg/kg (Rat)	5000mg/kg (Rat)	No data provided.

11.2 Skin corrosion/irritation

Contact may result in drying and defatting of the skin, rash and dermatitis.

11.3 Serious eye damage/eye irritation

Contact may result in irritation, lacrimation, pain and redness.

11.4 Respiratory or skin sensitisation

No data provided.

11.5 Germ cell mutagenicity

May cause genetic defects.

11.6 Toxic to reproduction

No data provided.

11.7 Carcinogenicity

No data provided.

11.8 STOT-single exposure

Not classified.

11.9 STOT-repeated exposure

Not classified.

11.10 Aspiration hazard

Not classified.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

No information provided.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

13.2 Local disposal regulations

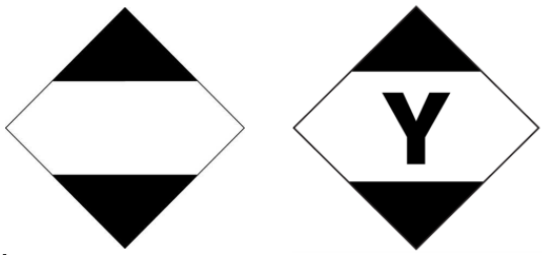
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water

supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

	CNDG	IMDG	IATA
14.1 UN number	**1950**	**1950**	**1950**
14.2 Proper shipping name	Aerosols, flammable, Limited Quantity	Aerosols, Limited Quantity	AEROSOLS, flammable,Limited Quantity
14.3 Transport hazard class	2.1	2.1	2.1
Packing group	Not available	Not available	Not available

14.4 Transport mark



（CNDG、 IMDG） （IATA）

14.5 Environmental hazards: Not available

14.6 Special precautions for user: Read safety instruction, SDS and emergency procedures before handling.

15. REGULATORY INFORMATION

This safety data sheet conforms to the following laws, regulations and standards:

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Regulations on the Control over Safety of Dangerous Chemicals
Regulations on Labor Protection in Workplaces Where Toxic Products Are Used
Measures for the safe Use of Chemical in Workplaces
Safety Data Sheet for chemical Products - Content and Order of Sections (GB/T16483)
General Rules for Preparation of Precautionary Labels for Chemicals (GB 15258)
Packing Symbol of Dangerous Goods (GB 190)
Packing - Pictorial Marking for Handling of Goods (GB/T 191)
Classification and Code of Dangerous Goods (GB 6944)
List of Dangerous Goods (GB 12268)
The principle of Classification of Transport Packaging Group of Dangerous Goods (GB/T 15098)
General Specifications for Transport Packages of Dangerous Goods (GB 12463)
Regulations on Road Transport of Dangerous Goods
Regulations on Railway Transport of Dangerous Goods
UN Recommendations on the Transport of Dangerous Goods (UN RTDG)

16. OTHER INFORMATION

References
EPA: AQUIRE database
NLM: Hazardous Substances Data Base

Disclaimer: The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this SDS consult your supervisor, a health & safety professional, or PM Distribution Ltd

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SAFETY DATA SHEET
Badger Multi-Purpose ABC Dry Chemical Fire Extinguisher (Re-chargeable and Non-rechargeable)

Walter Kidde Portable Equipment, Inc. encourages and expects you to read and understand the entire SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product Name	Badger Multi-Purpose ABC Dry Chemical Fire Extinguisher
Other Names	Ammonium Phosphate, Monoammonium Phosphate, Multi-Purpose, ABC, Premium ABC - 90% MAP
Recommended use of the chemical and restrictions on use	
Identified uses	Fire Extinguisher (re-chargeable and non-rechargeable)
Restrictions on use	For firefighting use on Class A, B, C types of fires
Company Identification	Walter Kidde Portable Equipment, Inc. 1016 Corporate Park Drive Mebane, NC 27302 USA
Customer Information Number	(919) 563-5911 (919) 304-8200
Emergency Telephone Number **CHEMTREC Number**	(800) 424-9300 (703) 527-3887 (International)
Issue Date	March 4, 2021
Supersedes Date	December 10, 2019
	Distributed by/Distribuè par: Kidde Canada Inc. 340 Four Valley Drive Vaughan, Ont L4K 5Z1 800-565-1976

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200), the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Gas under pressure – Compressed gas

Label Elements
Hazard Symbols



Signal Word: Warning

Hazard Statements
Contents under pressure; may explode if heated.

Precautionary Statements
Prevention
None

2. HAZARD IDENTIFICATION

Response
None
Storage
Protect from sunlight and store in well-ventilated place.
Keep container tightly closed.
Disposal
None

Other Hazards
Rechargeable fire extinguishers as sold are charged with compressed air. When recharged with nitrogen as instructed, they present a simple asphyxiant hazard and exposure to nitrogen gas at high concentrations can cause suffocation by reducing oxygen available for breathing.

This product may contain trace quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC has determined that Crystalline silica in the form of quartz or cristobalite dust is carcinogenic to humans (Group 1). To the best of our knowledge, it is unlikely that crystalline silica is above the concentration limit of 0.1% that would require classification.

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	1 - 10%
Acute dermal toxicity	1 - 10%
Acute inhalation toxicity	1 - 10%
Acute aquatic toxicity	1 - 10%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration*
Calcium Carbonate	471-34-1	1 – 5%
Mica	12001-26-2	0.5 – 1.5%
Clay (Kaolin)	1332-58-7	0.1 – 1.0%
Non-hazardous ingredients		
Monoammonium Phosphate	7722-76-1	80 – 100%

Note: Pressurized extinguishers are sold using compressed air as the expellant. Rechargeable extinguishers are specified to be recharged with nitrogen.

*Exact concentration withheld as trade secret.

4. FIRST- AID MEASURES

Description of necessary first-aid measures
Eyes
Immediately flood the eye with plenty of water for several minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

4. FIRST- AID MEASURES

Skin
Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.
Ingestion
Dilute by drinking large quantities of water and obtain medical attention.
Inhalation
Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
Notes to Physicians
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media
This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Specific hazards arising from the chemical
Pressurized containers may explode in heat of fire.

Special Protective Actions for Fire-Fighters
Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

Environmental Precautions
Prevent large quantities of the material from entering drains or watercourses.

Methods and materials for containment and cleaning up
Sweep up or vacuum and transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective clothing. Prevent skin and eye contact.

7. HANDLING AND STORAGE

Conditions for safe storage
Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized container. Store pressurized containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Calcium Carbonate
OSHA PEL: 15 mg/m3 TWA, total dust
5 mg/m3 TWA, respirable fraction
Mica
ACGIH TLV: 0.1 mg/m3 TWA, measured as respirable fraction of the aerosol, containing <1% crystalline silica
OSHA PEL: 20 mppcf, <1% crystalline silica
Kaolin
ACGIH TLV: 2 mg/m3 TWA, for particulate matter containing no asbestos and <1% Crystalline silica
OSHA PEL: 15 mg/m3 TWA, total dust
5 mg/m3 TWA, respirable fraction
Particulates not otherwise classified /regulated
OSHA PEL: 50 mppcf or 15 mg/m3 TWA, total dust
15 mppcf or 5 mg/m3 TWA, respirable fraction

Appropriate engineering controls
Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Individual protection measures
Respiratory Protection
Wear respiratory protection if there is a risk of exposure. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.
Skin Protection
Gloves
Eye/Face Protection
Chemical goggles or safety glasses with side shields.

Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Agent
Appearance

Physical State	Solid (powder)
Color	Pale Yellow

9. PHYSICAL AND CHEMICAL PROPERTIES

Odor	Odorless
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	No data available
Boiling Range/Point (°C/F)	Not applicable
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	No data available
Vapor Density (Air = 1)	Not applicable
VOC (g/l)	None
VOC (%)	None
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	No data available
Lower explosive limit	No data available
Flammability (solid, gas)	No data available

Expellant – Nitrogen (for recharged extinguishers)
Appearance

Physical State	Compressed gas
Color	Colorless
Odor	None
Odor Threshold	No data available
pH	Not applicable
Relative Density	0.075 lb/ft3 @70oF as vapor
Boiling Range/Point (°C/F)	-196°C/-321°F
Melting Point (°C/F)	-210°C/-346°F
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	Not applicable
Solubility in Water	0.02 g/L
Vapor Density (Air = 1)	0.97
VOC (g/l)	Not applicable
VOC (%)	Not applicable
Partition coefficient (n-octanol/water)	No data available
Viscosity	Not applicable

Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	Not explosive
Lower explosive limit	Not explosive
Flammability (solid, gas)	Not flammable

10. STABILITY AND REACTIVITY

Reactivity
Pressurized containers may rupture or explode if exposed to heat.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Exposure to direct sunlight - contact with incompatible materials

Incompatible Materials
Strong oxidizing agents - strong acids - sodium hypochlorite

Hazardous Decomposition Products
Oxides of carbon - ammonia - oxides of phosphorus - nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Calcium Carbonate:
Oral LD50 (Rat) >2000 mg/kg
Dermal LD50 (Rabbit) >2000mg/kg
Inhalation LC50(rat) >3.0mg/l
Mica:
Oral LD50 (Rat) >2000 mg/kg
Clay:
Oral LD50 (Rat) >5000 mg/kg
Dermal LD50 (Rabbit) >5000mg/kg
Nitrogen
Simple asphyxiant

Specific Target Organ Toxicity (STOT) – single exposure
Nitrogen: Exposure to nitrogen gas at high concentrations can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations can cause dizziness, shortness of breath, unconsciousness or asphyxiation.

Specific Target Organ Toxicity (STOT) – repeat exposure
Calcium Carbonate: Available data indicates this component is not expected to cause target organ effects after repeat exposure.

Serious Eye damage/Irritation
Calcium Carbonate: Not irritating (rabbit)

Mica: Not irritating (rabbit)

Skin Corrosion/Irritation
Calcium Carbonate: Not irritating (rabbit)
Mica: Not irritating (rabbit)

11. TOXICOLOGICAL INFORMATION

Respiratory or Skin Sensitization
Calcium Carbonate: Non-sensitizing to skin in Mouse local lymph node assay.

Carcinogenicity
This product may contain trace quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC has classified Silica Dust, Crystalline, in the form of quartz or cristobalite as 1 (carcinogenic to humans).

Germ Cell Mutagenicity
Calcium Carbonate: Negative results in the Mammalian Cell Gene Mutation Assay with and without metabolic activation, Ames test, and In vitro Mammalian Chromosome Aberration Test.

Reproductive Toxicity
No relevant studies identified.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
No relevant studies identified.

Mobility in soil
No relevant studies identified.

Persistence/Degradability
No relevant studies identified.

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of container in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data	Fire extinguishers, 2.2, UN1044
UN Proper Shipping Name	Fire extinguishers

UN Class	(2.2)
UN Number	UN1044
UN Packaging Group	Not applicable
Classification for AIR Transportation (IATA)	Consult current IATA Regulations prior to shipping by air.

14. TRANSPORT INFORMATION

Classification for Water Transport IMDG	Consult current IMDG Regulations prior to shipping by water.

When shipping via ground, portable fire extinguishers pressurized to less than 241 psi and of less than 1100 cubic inches in size meet the requirements of “Limited Quantity” as referenced in 49 CFR 173.309 (2010). There is no limited quantity designation for fire extinguishers when shipped by air or water.

This section is believed to be accurate at the time of preparation. It is not intended to be a complete statement or summary of the applicable laws, rules, or hazardous material regulations, and is subject to change. Users have the responsibility to confirm compliance with all laws, rules, and hazardous material regulations in effect at the time of shipping.

15. REGULATORY INFORMATION

United States TSCA Inventory
This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

Canada DSL Inventory
All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

SARA Title III Sect. 311/312 Categorization
Gas under pressure
Simple asphyxiant (when recharged with nitrogen)

SARA Title III Sect. 313
This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS#: Chemical Abstracts Service Number
EC50: Effect Concentration 50%
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date: March 4, 2021
Replaces: December 10, 2019
Changes made: Removal of non-pressurized product, revision to logo and company name.

16. OTHER INFORMATION

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Walter Kidde Portable Equipment, Inc. assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Bell & Gossett Lubricating Oil

Product Use: Hydraulic Oil

Product Number(s): L23401, L25201, 118153, 118154

Synonyms: Hydraulic Oil AW ISO 68

Company Identification

Bell & Gossett

a ITT Industries

8200 Austin Ave

Morton Grove, IL 60053

United States of America

www.bellgossett.com

Emergency Telephone Number: (847) 966-3700

Supplier Identification

Chevron Products Company

a division of Chevron U.S.A. Inc.

6001 Bollinger Canyon Rd.

San Ramon, CA 94583

United States of America

www.chevronlubricants.com

Supplier Product Number: CPS255675

Synonyms: Chevron Hydraulic Oil AW ISO 68

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com

Product Information: (800) LUBE TEK

MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	90 - 100 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 170 °C (338 °F) Minimum

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: No data available Upper: No data available

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Yellow

Physical State: Liquid

Odor: Petroleum odor

pH: Not Applicable

Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)

Vapor Density (Air = 1): >1

Boiling Point: 315°C (599°F)

Solubility: Soluble in hydrocarbon solvents; insoluble in water.

Freezing Point: Not Applicable

Specific Gravity: 0.86 - 0.9 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

Density: 0.86 kg/l - 0.87 kg/l @ 15°C (59°F)

Volatile Organic

Compounds (VOC) : <2.1 %weight

Viscosity: 28.8 cSt @ 40°C (104°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: No product toxicology data available.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

48 hour(s) EC50: >1000 mg/l (Daphnia magna)

96 hour(s) LC50: >1000 mg/l (Oncorhynchus mykiss)

This material is not expected to be harmful to aquatic organisms.

ENVIRONMENTAL FATE

Ready Biodegradability: This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

Additional Information:NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; MAY BE REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO TI OR IATA DGR

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: 1. Immediate (Acute) Health Effects: NO

2. Delayed (Chronic) Health Effects: NO

3. Fire Hazard: NO

4. Sudden Release of Pressure Hazard: NO

5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
02=NTP Carcinogen
03=EPCRA 313
04=CA Proposition 65
05=MA RTK
06=NJ RTK
07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required. All other components are listed or exempted from listing on EINECS.

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Hydraulic oil)

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : INDUSTRIAL OIL 1 - IND1

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 5,9,16

Revision Date: September 11, 2009

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on	OSHA - Occupational Safety and Health Administration

Cancer	

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by Bell and Gossett, 8200 Austin Avenue, Morton Grove, IL 60053

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Air Tool Lubricant

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 01/05/2020 Revision date: 01/05/2016 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Air Tool Lubricant

Product code : 16-ATL, 128-ATL, 5-ATL & 55-ATL

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Multi-Purpose Lubricant

1.3. Details of the supplier of the safety data sheet

The Blaster Corporation
8500 Sweet Valley Drive
Valley View, Ohio 44125 - USA
T (216) 901-5800 - F (216) 901-5801
www.blasterproducts.com

1.4. Emergency telephone number

Emergency number : Chemtrec (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin irritation 2
Specific target organ toxicity - Repeated exposure 2
Aspiration toxicity 1

2.2. Label elements

GHS-US labelling

This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Hazard pictograms (GHS-US) :



GHS07



GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Causes skin irritation. May cause damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways.

Precautionary statements (GHS-US) : Wash hands thoroughly after handling. Wear protective gloves. Do not breathe dust/fume/gas/mist/vapors/spray. Get medical advice/attention if you feel unwell. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skinirritation occurs: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Store locked up. Dispose of contents/container in accordancewith local/regional/national/international regulations.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
White mineral oil, petroleum	(CAS No) 8042-47-5	60 - 100	Not classified
Distillates, petroleum, hydrotreated middle	(CAS No) 64742-46-7	7 - 13	Flam. Liq. 4 Acute Tox. 4 (Inhalation:dust,mist) Skin Irrit. 2 STOT RE 2 Asp. Tox. 1
Distillates, petroleum, hydrotreated light naphthenic	(CAS No) 64742-53-6	3 - 7	Asp. Tox. 1 Acute Tox. 4 (dust/mist) Carc. 1B

* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

NEXREG

FRS SDS Reference Library | S014 | Library page 130

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skincontact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eyecontact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skincontact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness andswelling.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water fog, carbon dioxide, dry chemical or alcohol foam.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon, hydrocarbons.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/ spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, orsmoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed and in a well-ventilatedplace. Keep cool.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

White mineral oil, petroleum(8042-47-5)		
USA ACGIH	ACGIH TWA	Not applicable
USA OSHA	OSHA PEL (TWA)	Not applicable

Distillates, petroleum, hydrotreated middle (64742-46-7)		
USA ACGIH	ACGIH TWA	Not applicable
USA OSHA	OSHA PEL (TWA)	Not applicable

Distillates, petroleum, hydrotreated light naphthenic (64742-53-6)		
USA ACGIH	ACGIH TWA (mg/m³)	5 mg/m³ (mist)
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³ (mist)

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Safety glasses or goggles are recommended when using product.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Oily

Colour : No data available

Odour : Petroleum

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : < 1

Melting point : No data available

Freezing point : No data available

Boiling point : 371.1 - 460 °C (700 - 860°F)

Flash point : > 182.2 °C (>360°F)

Auto-ignition temperature : > 315.6 °C (>600°F)

Decomposition temperature : No data available

Flammability (solid, gas) : Not flammable

Vapour pressure : No data available

Relative vapour density at 20 °C : > 1 (Air = 1)

Relative density : 0.86

Solubility : Insoluble

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : 19 cSt @ 40°C (104°F)

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Excessive water.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Air Tool Lubricant	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	No data available

White mineral oil, petroleum(8042-47-5)	
LD50 oral rat	>5000 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LC50 inhalation rat	> 5 mg/l/4h

Distillates, petroleum, hydrotreated middle (64742-46-7)	
LD50 oral rat	7400 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LC50 inhalation rat	4.6 mg/l/4h

Distillates, petroleum, hydrotreated light naphthenic (64742-53-6)	
LD50 oral rat	>5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	2.18 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : May be fatal if swallowed and enters airways.

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness andswelling.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Air Tool Lubricant	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Air Tool Lubricant	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No known ecological damage caused by thisproduct.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA)inventory.

15.2. US State regulations

Air Tool Lubricant	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductiveharm.

SECTION 16: Other information

Indication of changes : None.

Date of issue : 01/05/2020

Other information : None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

BRAKE CLEANER

SAFETY DATA SHEET

According to Canada's Hazardous Products Regulations (HPR) SOR/2015-17

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Mixture
CAS No.	Mixture
Trade Name	BRAKE CLEANER
Product Code	20-BC, 20-BC-CND

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Brake cleaner
Uses Advised Against	None

Company Identification	The Blaster Corporation 8500 Sweet Valley Drive Valley View, Ohio 44125 USA www.blastercorp.com
Telephone	(800) 858-6605
Fax	(216) 901-5801

Emergency telephone number

Emergency Phone No. — **Transportation Emergency:** CHEMTEL 800-255-3924

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

HPR/WHIMIS 2015/GHS Classification — Flam. Aerosol 1; Compressed dissolved gas; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Asp. Tox. 1

Label elements

Hazard Symbol



Signal Word(s): **DANGER**

Hazard Statement(s):

Extremely flammable aerosol.

Contains gas under pressure; may explode if heated.

Causes serious eye irritation.

Repeated exposure may cause skin dryness or cracking.

May cause drowsiness or dizziness.

May cause damage to organs: (Optic nerve, Central nervous system)

Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Do not spray on an open flame or other ignition source.

Avoid breathing spray.

Protect from sunlight and do not expose to temperatures exceeding 50 ºC/122 ºF.

Wash hands and exposed skin after use.

Keep out of reach of children.

Other hazards — None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt. *	CAS No.	Hazard classification
Acetone	70 - 90	67-64-1	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Heptane, branched, cyclic and linear	4 -10	426260-76-6	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336
Carbon dioxide	4 - 10	124-38-9	Compressed dissolved gas

Additional Information - None

* The exact percentage withheld as a trade secret.

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation	Move person to fresh air. If breathing is laboured, administer oxygen. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If symptoms develop, obtain medical attention.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms occur obtain medical attention.
Ingestion	Do not give anything by mouth to an unconscious person. Seek medical treatment.
Most important symptoms and effects, both acute and delayed	May cause damage to organs: (Optic nerve, Central nervous system)
Indication of any immediate medical attention and special treatment needed	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media -Unsuitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or water spray. Do not use water jet.
Special hazards arising from the substance or mixture	Highly flammable vapour (flash point below 23°C).
Advice for fire-fighters	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Take precautionary measures against static discharges. Avoid contact with skin and eyes. Avoid breathing vapours.

Environmental precautions
Prevent liquid entering sewers, basements and workpits.

Methods and material for containment and cleaning up
Cover spills with inert absorbent material. Transfer to a container for disposal or recovery.

Reference to other sections
None

Additional Information
None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid contact with skin and eyes. Use product in a well-ventilated area only.

Conditions for safe storage, including any incompatibilities

-Storage temperature
Keep in a cool, well ventilated place. Store at temperatures not exceeding 50 °C / 122 °F.

-Incompatible materials
This product should be stored away from sources of strong heat or oxidising chemicals.

Specific end use(s)
Brake cleaner

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		OEL (Canada)	TLV (ACGIH)	OEL (Canada)	TLV (ACGIH)	
Acetone	67-64-1	500 ppm	250 ppm	750 ppm	500 ppm	-----
Heptane, branched, cylic and linear	426260-76-6	400 ppm*	1500 mg/m^3	-----	-----	*n-heptane
Carbon dioxide	124-38-9	5000 ppm	5000 ppm	30,000 ppm	30,000 ppm	-----

Recommended monitoring method
NIOSH 1300 (Ketones I); NIOSH 2000 (Methanol); NIOSH 1500 (hydrocarbons, B.P. 36 - 126 ºC)

Exposure controls

Appropriate engineering controls
Provide adequate ventilation to ensure that the occupational exposure limit is not exceeded.

Personal protection equipment

Eye/face protection
Wear protective eyewear (goggles, face shield, or safety glasses).



Skin protection (Hand protection/ Other)
Wear suitable gloves if prolonged skin contact is likely (Nitrile rubber)



Respiratory protection 	Normally no personal respiratory protection is necessary. In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Not normally required. Use gloves with insulation for thermal protection, when needed.
Environmental Exposure Controls	None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color.	Colorless
Odour	Acetone-like
Odour Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	56 (Acetone)
Flash Point (°C)	-17 (Acetone)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Explosive Limit Ranges	2.5% - 12.8% v/v (Acetone)
Vapour pressure (Pascal)	2.4×10^4 (Acetone)
Vapour Density (Air=1)	Not available
Density (g/ml)	Not available
Solubility (Water)	Not available
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	465 (Acetone)
Decomposition Temperature (°C)	Not available
Kinematic Viscosity	<20
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
Other information	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	Avoid contact with heat and ignition sources.
Incompatible materials	Strong oxidising agents
Hazardous decomposition product(s)	Carbon monoxide, Carbon dioxide, Acrid smoke

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation**,** Skin Contact**,** Eye Contact

Information on toxicological effects

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Acute toxicity	Oral: LD50 >5 g/kg-bw Dermal: LD50 >2 g/kg-bw Inhalation: LC50 = 65 - 103 mg/L (Vapour), 4-hr. rat May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

Irritation/Corrosivity — Causes skin irritation. Repeated exposure may cause skin dryness or cracking. May cause eye irritation.

Sensitisation — It is not a skin sensitiser.

Repeated dose toxicity — NOAEC: 12350 mg/m3 (2 yr, inhal., rat, Systemic effects)
LOAEC: 1650 mg/m3 (2 hr, inhal., rat, CNS effects)
May cause drowsiness or dizziness.

Carcinogenicity — No data. It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity — There is no evidence of mutagenic potential.
Toxicity for reproduction — No information available

Acetone (CAS No. 67-64-1)

Acute toxicity — Oral LD50 = 5800 mg/kg (rat)
Dermal LD50 >15800 mg/kg (rabbit)
Inhalation LC50 76 mg/L (4 hour(s)) (rat) - Vapours may cause drowsiness and dizziness.

Irritation / Corrosivity — Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.

Sensitisation — It is not a skin sensitiser.

Repeated dose toxicity — Oral NOAEL = 900 mg/kg/day (rat) (90-days)
Inhalation NOAEL ≥ 19,000 ppm (rat)

Carcinogenicity — It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity — Negative
Toxicity for reproduction — Negative
Other information — None known.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity - Substances in preparations / mixtures

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Short term — LL50 (96 hour): >13.4 mg/L (*Oncorhynchus mykiss*)
EL50 (48 hour): 3 mg/l (*Daphnia magna,* mobility*)*
EC50 (96 hour): 13 mg/l (*Pseudokirchnerella subcapitata*)

Long Term — NOELR (28 days) 1.5 mg/l *(Fish*) QSAR
LOEC (21 days): 0.32 mg/l (*Daphnia magna*)
NOEL (96 hour) 6.3 mg/l (Algae)

Persistence and degradability — Readily biodegradable.
Bioaccumulative potential — The product has no potential for bioaccumulation.
Mobility in soil — Not available.
Results of PBT and vPvB assessment — Not classified as PBT or vPvB.
Other adverse effects — None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods — Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

SECTION 14: TRANSPORT INFORMATION

	Land transport (TDG)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	1950	1950	1950
Proper Shipping Name	Aerosols, flammable	Aerosols, flammable	Aerosols, flammable
Transport hazard class(es)	2.1	2.1	2.1
Packing group	Not applicable	Not applicable	Not applicable
Environmental hazards	None assigned	None assigned	None assigned
Special precautions for user	None assigned	None assigned	None assigned

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance to CPR Section 12 and the MSDS contains all the information required by the CPR.

Canada (DSL/NDSL) - All chemicals listed.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.
Date of preparation: November 10, 2016
Hazard Statement(s) and Risk Phrases Listed in: SECTION 2:/ SECTION 3:

Hazard Statement(s)
- H225: Highly flammable liquid and vapour.
- H301: Toxic if swallowed.
- H304: May be fatal if swallowed and enters airways.
- H311: Toxic in contact with skin.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H331: Toxic if inhaled.
- H336: May cause drowsiness or dizziness.
- H370: Causes damage to organs.

Training advice: None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

SAFETY DATA SHEET

1. Identification

Product identifier **CARB MEDIC CARBURETOR CLEANER**

Other means of identification

SDS number M4814

Part No. M4814, M4824

Tariff code 3814.00.2000

Recommended use Carburetor Cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name RSC Chemical Solutions

Address 600 Radiator Road
Indian Trail, NC 28079
United States

Telephone Customer Service: (704) 821-7643
Technical: (704) 684-1811

Website www.rscbrands.com

E-mail sds@rscbrands.com

Emergency phone number Emergency Telephone: (303) 623-5716
Emergency Contact: RMPDC (877-740-5015)

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 2
	Reproductive toxicity (the unborn child)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. Harmful if inhaled. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe gas. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Rinse mouth. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	3% of the mixture consists of component(s) of unknown acute oral toxicity. 3% of the mixture consists of component(s) of unknown acute inhalation toxicity. % of the mixture consists of component(s) of unknown acute inhalation toxicity. 65.74% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 65.74% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
DICHLOROMETHANE		75-09-2	60 - < 70
BENZENE, DIMETHYL		1330-20-7	10 - < 20
BENZENE, METHYL-		108-88-3	10 - < 20
Carbon Dioxide		124-38-9	1 - < 3
ETHYLBENZENE		100-41-4	1 - < 3

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Foam. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not breathe gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Isolate area until gas has dispersed. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Do not breathe mist or vapor. Do not breathe gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
DICHLOROMETHANE (CAS 75-09-2)	STEL	125 ppm
	TWA	25 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
BENZENE, DIMETHYL (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm
ETHYLBENZENE (CAS 100-41-4)	PEL	435 mg/m3
		100 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
BENZENE, METHYL- (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
BENZENE, DIMETHYL (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm
BENZENE, METHYL- (CAS 108-88-3)	TWA	20 ppm
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
DICHLOROMETHANE (CAS 75-09-2)	TWA	50 ppm
ETHYLBENZENE (CAS 100-41-4)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
BENZENE, METHYL- (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm
ETHYLBENZENE (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
BENZENE, DIMETHYL (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*
BENZENE, METHYL- (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*
DICHLOROMETHANE (CAS 75-09-2)	0.3 mg/l	Dichloromethane	Urine	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
ETHYLBENZENE (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

BENZENE, METHYL- (CAS 108-88-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

BENZENE, METHYL- (CAS 108-88-3) Skin designation applies.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Clear.

Physical state Liquid, Gas.

Form Aerosol.

Color Colorless

Odor Typical Hydrocarbon/Chlorinated

Odor threshold Not available.

pH Not available.

Melting point/freezing point -139 °F (-95 °C) estimated

Initial boiling point and boiling range Not available.

Flash point None

Evaporation rate Not available.

Flammability (solid, gas) Not applicable. Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.3 % estimated

Flammability limit - upper (%) 7 % estimated

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 579.94 hPa estimated

Vapor density Not available.

Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	896 °F (480 °C) estimated
Decomposition temperature	Not available.
Viscosity	< 1 cSt
Other information	
Density	9.44 lbs/gal estimated
Explosive properties	Not explosive.
Flame extension	> 31 in
Flammability (flash back)	No
Heat of combustion (NFPA 30B)	10.92 kJ/g estimated
Oxidizing properties	Not oxidizing.
Percent volatile	97 % estimated
Specific gravity	1.13 estimated
VOC (Weight %)	44 % w/w

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents. Halogens.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Harmful if inhaled. Harmful if swallowed. Narcotic effects.

Components	Species	Test Results
BENZENE, DIMETHYL (CAS 1330-20-7)		
Acute		
Dermal		
LD50	Rabbit	> 43 g/kg
Inhalation		
LC50	Mouse	3907 mg/l, 6 Hours
	Rat	6350 mg/l, 4 Hours
Oral		
LD50	Mouse	1590 mg/kg

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Components	Species	Test Results
	Rat	3523 - 8600 mg/kg
BENZENE, METHYL- (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	12124 mg/kg
		14.1 ml/kg
Inhalation		
LC50	Mouse	5320 ppm, 8 Hours
		400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours
		12200 ppm, 2 Hours
		8000 ppm, 4 Hours
Oral		
LD50	Rat	2.6 g/kg
DICHLOROMETHANE (CAS 75-09-2)		
Acute		
Inhalation		
LC50	Guinea pig	11600 ppm, 6 Hours
		40.2 mg/l, 6 Hours
	Mouse	14400 ppm, 7 Hours
		56.23 mg/l, 7 Hours
		51.5 mg/l, 2 Hours
		49.1 mg/l, 6 Hours
	Rat	2000 mg/l, 15 Minutes
		88 mg/l, 900 Days
		79 mg/l, 2 Hours
		52 mg/l, 6 Hours
LD50	Mouse	16000 ppm, 7 Hours
Oral		
LD50	Rat	1600 mg/kg
ETHYLBENZENE (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	17800 mg/kg
Oral		
LD50	Rat	3500 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

BENZENE, DIMETHYL (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.
BENZENE, METHYL- (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.

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DICHLOROMETHANE (CAS 75-09-2)	2A Probably carcinogenic to humans.
ETHYLBENZENE (CAS 100-41-4)	2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

DICHLOROMETHANE (CAS 75-09-2)	Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

DICHLOROMETHANE (CAS 75-09-2)	Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
BENZENE, DIMETHYL (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	7.711 - 9.591 mg/l, 96 hours
BENZENE, METHYL- (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours
DICHLOROMETHANE (CAS 75-09-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1250 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	140.8 - 277.8 mg/l, 96 hours
ETHYLBENZENE (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	7.5 - 11 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

BENZENE, DIMETHYL	3.12 - 3.2
BENZENE, METHYL-	2.73
DICHLOROMETHANE	1.25
ETHYLBENZENE	3.15

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number	Not available.
UN proper shipping name	Consumer Commodity
Transport hazard class(es)	
Class	ORM-D
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T4, TP1
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1950
UN proper shipping name	Aerosol, flammable
Transport hazard class(es)	
Class	2
Subsidiary risk	6.1
Packing group	Not applicable.
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Forbidden.
Cargo aircraft only	Forbidden.

IMDG

UN number	UN1950
UN proper shipping name	Aerosols
Transport hazard class(es)	
Class	2
Subsidiary risk	6.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

IATA; IMDG



Marine pollutant



General information IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

BENZENE, DIMETHYL (CAS 1330-20-7)	Listed.
BENZENE, METHYL- (CAS 108-88-3)	Listed.
DICHLOROMETHANE (CAS 75-09-2)	Listed.
ETHYLBENZENE (CAS 100-41-4)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

DICHLOROMETHANE (CAS 75-09-2)	Cancer Heart Central nervous system Liver Skin irritation Eye irritation

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
DICHLOROMETHANE	75-09-2	60 - < 70
BENZENE, DIMETHYL	1330-20-7	10 - < 20
BENZENE, METHYL-	108-88-3	10 - < 20
ETHYLBENZENE	100-41-4	1 - < 3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
DICHLOROMETHANE (CAS 75-09-2)
ETHYLBENZENE (CAS 100-41-4)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

BENZENE, METHYL- (CAS 108-88-3)	6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

BENZENE, METHYL- (CAS 108-88-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

BENZENE, METHYL- (CAS 108-88-3)	594

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
DICHLOROMETHANE (CAS 75-09-2)
ETHYLBENZENE (CAS 100-41-4)

US. Massachusetts RTK - Substance List

BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
Carbon Dioxide (CAS 124-38-9)
DICHLOROMETHANE (CAS 75-09-2)
ETHYLBENZENE (CAS 100-41-4)

US. New Jersey Worker and Community Right-to-Know Act

BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
Carbon Dioxide (CAS 124-38-9)
DICHLOROMETHANE (CAS 75-09-2)
ETHYLBENZENE (CAS 100-41-4)

US. Pennsylvania Worker and Community Right-to-Know Law

BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
Carbon Dioxide (CAS 124-38-9)
DICHLOROMETHANE (CAS 75-09-2)
ETHYLBENZENE (CAS 100-41-4)

US. Rhode Island RTK

BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
DICHLOROMETHANE (CAS 75-09-2)
ETHYLBENZENE (CAS 100-41-4)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

DICHLOROMETHANE (CAS 75-09-2)	Listed: April 1, 1988
ETHYLBENZENE (CAS 100-41-4)	Listed: June 11, 2004

US - California Proposition 65 - CRT: Listed date/Developmental toxin

BENZENE, METHYL- (CAS 108-88-3)	Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

BENZENE, METHYL- (CAS 108-88-3)	Listed: August 7, 2009

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-14-2015

Revision date 11-20-2015

Version # 03

HMIS® ratings
Health: 2*
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 1
Instability: 0

NFPA ratings



Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information
Physical & Chemical Properties: Multiple Properties
Stability and reactivity: Possibility of hazardous reactions
Toxicological information: Ingestion
Transport Information: Material Transportation Information

Safety Data Sheet

SECTION 1 IDENTIFICATION

Chevron Way Lubricant 32, 68, 220

Recommended Use: Industrial Oil
Restrictions on Use: Consult supplier when used other than those specified.
Other means of identification: Not applicable
Product Number(s): 273110, 273111, 277315
Company Identification
Chevron Products Company
a division of Chevron U.S.A. Inc.
1400 Smith Street
Houston, TX 77002
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:
Not classified as hazardous according to 29 CFR 1910.1200 (2012).

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %weight

SECTION 4 FIRST AID MEASURES

Description of first aid measures
Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing

and shoes or thoroughly clean before reuse.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed
IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.
Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER HEALTH EFFECTS: Not classified

Indication of any immediate medical attention and special treatment needed
Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
UNSUITABLE EXTINGUISHING MEDIA: No data available
Unusual Fire Hazards: Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Observe all relevant local and international regulations. Eliminate all sources of ignition in vicinity of spilled material. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem

or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed. Keep out of the reach of children.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear chemical personal protective equipment (PPE) to prevent skin contact. Selection

of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	120
Nitrile	0.8	240
Viton Butyl	0.3	240

Respiratory Protection: A site-specific risk assessment should be conducted by an Occupational Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved respirator such as:

Air purifying respirator -
If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.
Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).
Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).
Refer to respirator manufacturers to obtain service life of cartridge / filter.

Positive pressure air-supplying respirator -
If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

Occupational Exposure Limits:

Component	Agency	Form	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	--	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	--	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown
Physical State: Liquid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: No data available
Relative Vapor Density: No data available

Initial Boiling Point: No data available
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: No data available
Melting Point: No data available
Particle Characteristics: Not applicable
Density: 0.86 kg/l - 0.885 kg/l @ 15°C (59°F) (Typical)
Kinematic Viscosity: 32 mm2/s - 209 mm2/s @ 40°C (104°F) (Minimum)
Evaporation Rate: No data available
Decomposition temperature: No data available
Partition coefficient n-octanol/water (logarithmic value): No data available

FLAMMABLE PROPERTIES:
Flammability (solid, gas): No Data Available

Flashpoint: (Cleveland Open Cup) 200 °C (392 °F) (Minimum)
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: None known (None expected)

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Corrosion/Irritation: The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Sensitization: The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The material is not considered an oral toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Carcinogenicity: The material is not considered a carcinogen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Reproductive Toxicity: The material is not considered a reproductive toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Single Exposure: The material is not considered a target organ toxicant (single exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Repeated Exposure: The material is not considered a target organ toxicant (repeated exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Aspiration Hazard: The material is not considered an aspiration hazard.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).
These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms.
The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is not expected to be readily biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Partition coefficient n-octanol/water (logarithmic value): No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: Not applicable

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	05=MA RTK
01-2A=IARC Group 2A	06=NJ RTK
01-2B=IARC Group 2B	07=PA RTK
02=NTP Carcinogen	08-1=TSCA 5(e)
03=EPCRA 313	08-2=TSCA 12(b)
04=CA Proposition 65	

No components of this material were found on the regulatory lists above.
CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Lubricating oil)

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 0 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the American Coatings Association (ACA) (for HMIS ratings).

REVISION STATEMENT:
SECTION 01 - Company SDS Address information was modified.
SECTION 01 - Health Emergency information was modified.
SECTION 06 - Personal Precautions, Protective Equipment and Emergency Procedures information was modified.
SECTION 08 - Respiratory Protection information was added.
SECTION 08 - Respiratory Protection information was modified.
SECTION 08 - Skin Protection information was modified.
SECTION 11 - Toxicological Information information was modified.

Revision Date: August 22, 2025

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	PNOS - Particles Not Otherwise Specified

Prepared according to the 29 CFR 1910.1200 (2024) by Chevron.

The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.

SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**Coated Finished Flap Discs**
Product Code:	Coated
UPC Number:	66261119269

Other means of identification:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:	Abrasive Product.

Chemical manufacturer address and telephone number:

Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
Website:	www.Nortonabrasives.com
General Phone Number:	508-795-5000

Emergency phone number:

Emergency Phone Number:	508-795-5000

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions:	None generally recognized.

Fiberglass

Inhalation:	Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Crystalline Silica, Quartz	14808-60-7	1 - 5 by weight	238-878-4
Heptane	142-82-5	5 - 10 by weight	
Liquefied petroleum gas	68476-85-7	1 - 5 by weight	
Starch	65996-63-6	1 - 5 by weight	
Aliphatic Amines	No Data	1 - 5 by weight	
Inorganic fluorides	Not Applicable	5 - 10 by weight	
Animal Glue	No Data	1 - 5 by weight	
Zirconium dioxide	1314-23-4	5 - 10 by weight	215-227-2
Epoxy resin	25068-38-6	5 - 10 by weight	
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Calcium carbonate	1317-65-3	5 - 10 by weight	215-279-6
Aluminum Oxide, Non-fibrous	1344-28-1	10 - 30 by weight	215-691-6
Resin	9003-35-4	10 - 30 by weight	

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid: Not applicable.

Indication of immediate medical attention and special treatment needed:

Note to Physicians: Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.

Unsuitable extinguishing media: Not applicable.

Specific hazards arising from the chemical:

Hazardous Combustion Byproducts: Not applicable.

Unusual Fire Hazards: Not applicable.

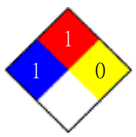
Special protective equipment and precautions for fire-fighters:

Protective Equipment: As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire Fighting Instructions: Not applicable.

NFPA Ratings:

NFPA Health: 1
NFPA Flammability: 1
NFPA Reactivity: 0



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions: Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions: Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures: Not applicable.

Methods and materials for containment and cleaning up:

Methods for containment: Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.

Methods for cleanup: Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions: Not applicable.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ingredient	**Guideline OSHA**	**Guideline NIOSH**	**Guideline ACGIH**	**Quebec Canada**	**Ontario Canada**
Crystalline Silica, Quartz			TLV-TWA: 0.025 mg/m3 Respirable fraction (R)	VEMP-TWA: 0.1 mg/m3 Respirable fraction (R)	OEL-TWAEV: 0.05 mg/m3 Respirable fraction (R)
Inorganic fluorides	PEL-TWA 2.5 mg/m3	REL-TWA 2.5 mg/m3	TLV-TWA 2.5 mg/m3		
Zirconium dioxide			TLV-TWA: 10 mg/m3 as zirconium compounds		
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass		TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass		
Calcium carbonate				VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)		TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)

Ingredient	**Alberta Canada**	**Mexico**	**British Columbia Canada**		
Crystalline Silica, Quartz	OEL-TWA: 0.1 mg/m3 Respirable fraction (R)	LMPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 0.025 mg/m3 Respirable fraction (R)		
Calcium carbonate	OEL-TWA: 10 mg/m3		OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Aluminum Oxide, Non-fibrous	OEL-TWA: 10 mg/m3	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		

Appropriate engineering controls:

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
PPE Pictograms:	

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance:	Solid article.
Color:	Not determined.
Odor:	Odorless.
Odor Threshold:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Density:	Not determined.
Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity: Not applicable.

Chemical Stability:

Chemical Stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products: Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	**NIOSH**	**OSHA**	**IARC**	**NTP**		**MEXICO**
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Crystalline Silica, Quartz :

RTECS Number: VV7330000

Zirconium dioxide :

RTECS Number: ZH8800000

Epoxy resin :

RTECS Number: SL6475000

Eye: Eye - Rabbit Standard Draize test.: 100 mg [mild] (RTECS)

Ingestion: Oral - Rat LD50 : 11400 mg/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic - Weight loss or decreased weight gain]
Oral - Mouse LD50 : 15600 mg/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic - Weight loss or decreased weight gain] (RTECS)

Fiberglass :

RTECS Number: LK3651000

Calcium carbonate :

RTECS Number: EV9580000

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation:	Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

Resin :

RTECS Number:	SM8542500
Skin:	Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion:	Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:	Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

UN number:	Not regulated as hazardous material for transportation.
UN proper shipping name:	Not regulated as hazardous material for transportation.
Transport hazard class(es):	Not regulated as hazardous material for transportation.
Packing group:	Not regulated as hazardous material for transportation.
Environmental hazards:	Not regulated as hazardous material for transportation.
Special precautions for user:	Not regulated as hazardous material for transportation.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Inventory Status

	Japan ENCS	South Korea KECL	Australia AICS	Canada NDSL	Canada DSL
Crystalline Silica, Quartz					Listed
Zirconium dioxide					Listed

Epoxy resin					Listed
Fiberglass					Listed
Calcium carbonate				Listed	
Aluminum Oxide, Non-fibrous	(1) -23	KE-01012	Listed		Listed
Resin					Listed

	TSCA Inventory Status				
Crystalline Silica, Quartz	Listed				
Zirconium dioxide	Listed				
Epoxy resin	Listed				
Fiberglass	Listed				
Calcium carbonate	Listed				
Aluminum Oxide, Non-fibrous	Listed				
Resin	Listed				

Crystalline Silica, Quartz :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1406(1491)

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Crystalline Silica, Quartz :

EC Number: 238-878-4

Zirconium dioxide :

EC Number: 215-227-2

Fiberglass :

EC Number: 266-046-0

Calcium carbonate :

EC Number: 215-279-6

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

State Right To Know

	RI	MN	IL	PA	MA
Crystalline Silica, Quartz				Listed	Listed
Zirconium dioxide					Listed
Calcium carbonate				Listed	Listed
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard:	1
HMIS Fire Hazard:	1
HMIS Reactivity:	0

Health Hazard	**1**
Fire Hazard	**1**
Reactivity	**0**
Personal Protection	

SDS Creation Date:	August 15, 2009
SDS Revision Date:	March 31, 2015
MSDS Revision Notes:	GHS Update

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SAFETY DATA SHEET

1. Identification

Product identifier **All Purpose Enamel Gloss White Spray Paint**

Other means of identification

Product code 18006

Recommended use Coating

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)
703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not apply while equipment is energized. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Response	If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If exposed or concerned: Get medical attention.
Storage	Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
acetone		67-64-1	30 - 40
isobutyl acetate		110-19-0	10 - 20
propane		74-98-6	10 - 20
n-butane		106-97-8	5 - 10
titanium dioxide		13463-67-7	5 - 10
ethylene glycol propyl ether		2807-30-9	1 - 3
methyl isobutyl ketone		108-10-1	1 - 3
methyl propyl ketone		107-87-9	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Do not breathe mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm	
isobutyl acetate (CAS 110-19-0)	PEL	700 mg/m3 150 ppm	
methyl isobutyl ketone (CAS 108-10-1)	PEL	410 mg/m3 100 ppm	
methyl propyl ketone (CAS 107-87-9)	PEL	700 mg/m3 200 ppm	
propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm	
titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m3	Respirable fraction.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value
acetone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
isobutyl acetate (CAS 110-19-0)	STEL	150 ppm
	TWA	50 ppm
methyl isobutyl ketone (CAS 108-10-1)	STEL	75 ppm
	TWA	20 ppm
methyl propyl ketone (CAS 107-87-9)	STEL	150 ppm
n-butane (CAS 106-97-8)	STEL	1000 ppm
titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
isobutyl acetate (CAS 110-19-0)	TWA	700 mg/m3
		150 ppm
methyl isobutyl ketone (CAS 108-10-1)	STEL	300 mg/m3
		75 ppm
	TWA	205 mg/m3
		50 ppm
methyl propyl ketone (CAS 107-87-9)	TWA	530 mg/m3
		150 ppm
n-butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
methyl isobutyl ketone (CAS 108-10-1)	1 mg/l	Methyl isobutyl ketone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear protective gloves such as: Nitrile. Butyl rubber.

Other

Wear suitable protective clothing.

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Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Aerosol.
Color	White.
Odor	Aromatic.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	-47.2 °F (-44 °C)
Flash point	-2.2 °F (-19 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.7 %
Flammability limit - upper (%)	10.9 %
Vapor pressure	2442.4 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.77 - 0.85
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	689 °F (365 °C)
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	79.3 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Nitrates. Fluorine. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Prolonged skin contact may cause temporary irritation.

Eye contact	Causes serious eye irritation.
Ingestion	Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20000 mg/kg
Inhalation		
LC50	Rat	16000 ppm, 4 hours
Oral		
LD50	Rat	5800 mg/kg
ethylene glycol propyl ether (CAS 2807-30-9)		
Acute		
Dermal		
LD50	Rabbit	0.87 g/kg
Oral		
LD50	Rat	4.45 g/kg
methyl isobutyl ketone (CAS 108-10-1)		
Acute		
Dermal		
LD50	Rabbit	> 3 g/kg
Inhalation		
LC50	Rat	8.2 mg/l, 4 Hours
Oral		
LD50	Rat	2080 mg/kg
methyl propyl ketone (CAS 107-87-9)		
Acute		
Oral		
LD50	Rat	3.73 g/kg
propane (CAS 74-98-6)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
titanium dioxide (CAS 13463-67-7)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg
Oral		
LD50	Rat	> 10000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

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Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

methyl isobutyl ketone (CAS 108-10-1)	2B Possibly carcinogenic to humans.
titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity

Components		Species	Test Results
acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
methyl isobutyl ketone (CAS 108-10-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	492 - 593 mg/l, 96 hours
methyl propyl ketone (CAS 107-87-9)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	1190 - 1290 mg/l, 96 hours
titanium dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

acetone	-0.24
isobutyl acetate	1.78
methyl isobutyl ketone	1.31
methyl propyl ketone	0.91
n-butane	2.89
propane	2.36

Bioconcentration factor (BCF)

titanium dioxide	352

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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13. Disposal considerations

Disposal of waste from residues / unused products	If discarded, this product is considered a RCRA ignitable waste, D001. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

ethylene glycol propyl ether (CAS 2807-30-9)
methyl isobutyl ketone (CAS 108-10-1)

CERCLA Hazardous Substances: Reportable quantity

acetone (CAS 67-64-1)	5000 LBS
isobutyl acetate (CAS 110-19-0)	5000 LBS
methyl isobutyl ketone (CAS 108-10-1)	5000 LBS

CERCLA Hazardous Substance List (40 CFR 302.4)

acetone (CAS 67-64-1)	Listed.
ethylene glycol propyl ether (CAS 2807-30-9)	Listed.
isobutyl acetate (CAS 110-19-0)	Listed.
methyl isobutyl ketone (CAS 108-10-1)	Listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

ethylene glycol propyl ether (CAS 2807-30-9)
methyl isobutyl ketone (CAS 108-10-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

n-butane (CAS 106-97-8)
propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

acetone (CAS 67-64-1)	6532
methyl isobutyl ketone (CAS 108-10-1)	6715

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

acetone (CAS 67-64-1)	35 %WV
methyl isobutyl ketone (CAS 108-10-1)	35 %WV

DEA Exempt Chemical Mixtures Code Number

acetone (CAS 67-64-1)	6532
methyl isobutyl ketone (CAS 108-10-1)	6715

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

acetone (CAS 67-64-1)	Low priority
isobutyl acetate (CAS 110-19-0)	Low priority
methyl isobutyl ketone (CAS 108-10-1)	Low priority
methyl propyl ketone (CAS 107-87-9)	Low priority

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

acetone (CAS 67-64-1)
ethylene glycol propyl ether (CAS 2807-30-9)
methyl isobutyl ketone (CAS 108-10-1)
n-butane (CAS 106-97-8)
titanium dioxide (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act

acetone (CAS 67-64-1)
ethylene glycol propyl ether (CAS 2807-30-9)
isobutyl acetate (CAS 110-19-0)
methyl isobutyl ketone (CAS 108-10-1)

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methyl propyl ketone (CAS 107-87-9)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
titanium dioxide (CAS 13463-67-7)

US. Massachusetts RTK - Substance List

acetone (CAS 67-64-1)
isobutyl acetate (CAS 110-19-0)
methyl isobutyl ketone (CAS 108-10-1)
methyl propyl ketone (CAS 107-87-9)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
titanium dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

acetone (CAS 67-64-1)
ethylbenzene (CAS 100-41-4)
ethylene glycol propyl ether (CAS 2807-30-9)
isobutyl acetate (CAS 110-19-0)
methyl isobutyl ketone (CAS 108-10-1)
methyl propyl ketone (CAS 107-87-9)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
titanium dioxide (CAS 13463-67-7)

US. Rhode Island RTK

acetone (CAS 67-64-1)
ethylbenzene (CAS 100-41-4)
isobutyl acetate (CAS 110-19-0)
methyl isobutyl ketone (CAS 108-10-1)
methyl propyl ketone (CAS 107-87-9)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
titanium dioxide (CAS 13463-67-7)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004
methyl isobutyl ketone (CAS 108-10-1)	Listed: November 4, 2011
titanium dioxide (CAS 13463-67-7)	Listed: September 2, 2011

US - California Proposition 65 - CRT: Listed date/Developmental toxin

methyl isobutyl ketone (CAS 108-10-1)	Listed: March 28, 2014

Volatile organic compounds (VOC) regulations

EPA

Aerosol coatings (40 CFR 59, Subpt. E) Compliant

State

Aerosol coatings This product is regulated as a Non-Flat Paint. This product is compliant for sale in all 50 states.

Maximum incremental reactivity (MIR) 0.69

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 11-11-2016

Prepared by Allison Cho

Version # 01

Further information Not available.

HMIS® ratings Health: 2*
Flammability: 4
Physical hazard: 1
Personal protection: B

NFPA ratings Health: 2
Flammability: 4
Instability: 1

NFPA ratings



Disclaimer The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

Revision Information This document has undergone significant changes and should be reviewed in its entirety.

SAFETY DATA SHEET

1. Identification

Product identifier **Battery Cleaner with Acid Indicator - 11 oz**

Other means of identification

Product Code No. 05023 (Item# 1003640)

Recommended use Battery cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Contains gas under pressure; may explode if heated.

Precautionary statement

Prevention Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Use only outdoors or in a well-ventilated area. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying.

Response Wash hands after handling.

Storage Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.

Disposal Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
water		7732-18-5	80 - 90
liquefied petroleum gas		68476-86-8	5 - 10

Chemical name	Common name and synonyms	CAS number	%
2-butoxyethanol		111-76-2	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Call a POISON CENTER or doctor/physician.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

General fire hazards Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Do not get in eyes, on skin, or on clothing. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. For product usage instructions, see the product label.

Conditions for safe storage, including any incompatibilities Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120 °F/49 °C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3
		50 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-butoxyethanol (CAS 111-76-2)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3
		5 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol.
Color	Colorless.
Odor	Odorless.
Odor threshold	Not available.
pH	8.5
Melting point/freezing point	-102.6 °F (-74.8 °C) estimated
Initial boiling point and boiling range	211.9 °F (100 °C) estimated
Flash point	None (Tag Closed Cup)
Evaporation rate	Slow.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.1 % estimated
Flammability limit - upper (%)	10.6 % estimated
Vapor pressure	126.3 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	1.01
Solubility(ies)	
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	460.4 °F (238 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Percent volatile	94.3 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not classified.

Components	Species	Test Results
2-butoxyethanol (CAS 111-76-2)		
Acute		
Dermal		
LD50	Rabbit	220 mg/kg
Oral		
LD50	Rat	470 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-butoxyethanol 0.83

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Consult authorities before disposal. Contents under pressure. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

Hazardous waste code Not regulated.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	-
Special precautions for user	Not available.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

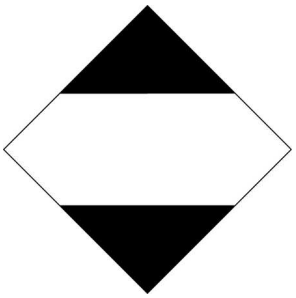
IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	-
ERG Code	2L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	-
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Not available.

DOT; IMDG



IATA



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-butoxyethanol (CAS 111-76-2)

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Classified hazard categories Gas under pressure

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-butoxyethanol	111-76-2	1 - 3

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

2-butoxyethanol (CAS 111-76-2)

US. Massachusetts RTK - Substance List

2-butoxyethanol (CAS 111-76-2)

US. Pennsylvania Worker and Community Right-to-Know Law

2-butoxyethanol (CAS 111-76-2)

US. Rhode Island RTK

2-butoxyethanol (CAS 111-76-2)

California Proposition 65



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-dioxane (CAS 123-91-1) Listed: January 1, 1988
ethylene oxide (CAS 75-21-8) Listed: July 1, 1987

California Proposition 65 - CRT: Listed date/Developmental toxin

ethylene oxide (CAS 75-21-8) Listed: August 7, 2009

California Proposition 65 - CRT: Listed date/Female reproductive toxin

ethylene oxide (CAS 75-21-8) Listed: February 27, 1987

California Proposition 65 - CRT: Listed date/Male reproductive toxin

ethylene oxide (CAS 75-21-8) Listed: August 7, 2009

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-butoxyethanol (CAS 111-76-2)

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	7.9 %
Consumer products (40 CFR 59, Subpt. C)	Not regulated

State

Consumer products	Not regulated
VOC content (CA)	7.9 %
VOC content (OTC)	7.9 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	06-08-2021
Prepared by	Danica Fulmer
Version #	01
Further information	CRC # 530C/1002544
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..
Revision information	This document has undergone significant changes and should be reviewed in its entirety.

SAFETY DATA SHEET

1. Identification

Product identifier **Brakleen® Brake Parts Cleaner**

Other means of identification

Product Code No. 05089 (Item# 1003708)

Recommended use Brake cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency 800-424-9300 (US)

(CHEMTREC) 703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Sensitization, skin	Category 1B
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Contains gas under pressure; may explode if heated. Causes skin irritation. May cause an allergic skin reaction. Causes eye irritation. May cause drowsiness or dizziness. May cause cancer. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response	If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Collect spillage.
Storage	Store locked up. Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

Supplemental information

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
tetrachloroethylene	perchloroethylene	127-18-4	90 - 100
carbon dioxide		124-38-9	1 - 5

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes and mucous membranes. Exposed individuals may experience eye tearing, redness, and discomfort. Irritation of nose and throat. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Dry chemical, CO2, or water spray.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Collect spillage. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Do not empty into drains. Observe good industrial hygiene practices. For product usage instructions, see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Protect from sunlight. Store in a well-ventilated place. Store in cool place. Exposure to high temperature may cause can to burst. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
tetrachloroethylene (CAS 127-18-4)	Ceiling	200 ppm
	TWA	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
tetrachloroethylene (CAS 127-18-4)	STEL	100 ppm
	TWA	25 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
tetrachloroethylene (CAS 127-18-4)	0.5 mg/l	Tetrachloroethylene	Blood	*
	3 ppm	Tetrachloroethylene	End-exhaled air	*

* - For sampling details, please see the source document.

Exposure guidelines

US - Minnesota Haz Subs: Skin designation applies

tetrachloroethylene (CAS 127-18-4) Skin designation applies.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower should be available when handling this product. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Viton/butyl. Polyvinyl alcohol (PVA). Silver Shield®

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Aerosol.

Color Colorless.

Odor Irritating.

Odor threshold 50 ppm

pH Not available.

Melting point/freezing point -8.1 °F (-22.3 °C) estimated

Initial boiling point and boiling range 250.3 °F (121.3 °C) estimated

Flash point None (Tag Closed Cup)

Evaporation rate	Very fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	1230.2 hPa estimated
Vapor density	5.76 (air = 1)
Relative density	1.62
Solubility (water)	0.02 % (77 °F (25 °C))
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	97.9 % estimated
Other information	
Partition coefficient (oil/water)	2.88

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products	Hydrogen chloride. Trace amounts of chlorine and phosgene. Carbon oxides. Halogenated materials. Carbonyl halides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes and mucous membranes. Exposed individuals may experience eye tearing, redness, and discomfort. Irritation of nose and throat. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity None known.

Components	Species	Test Results
tetrachloroethylene (CAS 127-18-4)		
Acute		
Dermal		
LD50	Rabbit	> 3228 mg/kg

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Components	Species	Test Results
Oral		
LD50	Rat	2629 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

tetrachloroethylene (CAS 127-18-4) 2A Probably carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

tetrachloroethylene (CAS 127-18-4) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Components		Species	Test Results
tetrachloroethylene (CAS 127-18-4)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4.73 - 5.27 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

tetrachloroethylene 2.88

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code D039: Waste Tetrachloroethylene
F001: Waste Halogenated Solvent - Spent Halogenated Solvent Used in Degreasing
F002: Waste Halogenated Solvent - Spent Halogenated Solvent

US RCRA Hazardous Waste U List: Reference

tetrachloroethylene (CAS 127-18-4) U210

Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, poison, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	6.1(PGIII)
Label(s)	2.2, 6.1
Packing group	Not applicable.
Special precautions for user	Forbidden from transportation by air.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III
Transport hazard class(es)	
Class	2.2
Subsidiary risk	6.1
Packing group	Not applicable.
ERG Code	2P
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2
Subsidiary risk	6.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

tetrachloroethylene (CAS 127-18-4)

CERCLA Hazardous Substance List (40 CFR 302.4)

tetrachloroethylene (CAS 127-18-4) Listed.

CERCLA Hazardous Substances: Reportable quantity

tetrachloroethylene (CAS 127-18-4) 100 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

tetrachloroethylene (CAS 127-18-4)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

tetrachloroethylene (CAS 127-18-4)

US. New Jersey Worker and Community Right-to-Know Act

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

US. Massachusetts RTK - Substance List

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

US. Pennsylvania Worker and Community Right-to-Know Law

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

US. Rhode Island RTK

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

tetrachloroethylene (CAS 127-18-4) Listed: April 1, 1988

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 0 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Brake Cleaner. This product is not compliant to be sold for use in California and New Jersey. This product is compliant in all other states.

VOC content (CA) 0 %

VOC content (OTC) 0 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 12-20-2013

Revision date 10-26-2017

Prepared by Allison Yoon

Version # 05

Further information CRC # 491G/1002481

HMIS® ratings
Health: 2*
Flammability: 0
Physical hazard: 0
Personal protection: B

NFPA ratings
Health: 2
Flammability: 0
Instability: 0

NFPA ratings



Disclaimer The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

Revision Information
Product and Company Identification: Product Codes
Handling and storage: Precautions for safe handling
Physical & Chemical Properties: Multiple Properties
Other information, including date of preparation or last revision: Further information

SAFETY DATA SHEET

1. Identification

Product identifier **Brakleen® Brake Parts Cleaner - 19 oz**

Other means of identification

Product Code No. 05089 (Item# 1003708)

Recommended use Brake parts cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Sensitization, skin	Category 1B
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Contains gas under pressure; may explode if heated. Causes skin irritation. May cause an allergic skin reaction. Causes eye irritation. May cause drowsiness or dizziness. May cause cancer.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist/vapors. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention.
Storage	Store locked up. Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
tetrachloroethylene	perchloroethylene	127-18-4	90 - 100
carbon dioxide		124-38-9	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms/effects, acute and delayed	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Dry chemical, CO2, or water spray.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Collect spillage. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Do not empty into drains. Observe good industrial hygiene practices. For product usage instructions, see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Protect from sunlight. Store in a well-ventilated place. Store in cool place. Exposure to high temperature may cause can to burst. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
tetrachloroethylene (CAS 127-18-4)	Ceiling	200 ppm
	TWA	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
tetrachloroethylene (CAS 127-18-4)	STEL	100 ppm
	TWA	25 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
tetrachloroethylene (CAS 127-18-4)	0.5 mg/l	Tetrachloroethylene	Blood	*
	3 ppm	Tetrachloroethylene	End-exhaled air	*

* - For sampling details, please see the source document.

Exposure guidelines

US - Minnesota Haz Subs: Skin designation applies

tetrachloroethylene (CAS 127-18-4) Skin designation applies.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower should be available when handling this product. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Viton/butyl. Polyvinyl alcohol (PVA). Silver Shield®.

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Aerosol.

Color Colorless.

Odor Irritating.

Odor threshold 50 ppm

pH Not available.

Melting point/freezing point -8.1 °F (-22.3 °C) estimated

Initial boiling point and boiling range 250.3 °F (121.3 °C) estimated

Flash point	None.
Evaporation rate	Very fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	1428.3 hPa estimated
Vapor density	5.76 (air = 1)
Relative density	1.62
Solubility(ies)	
Solubility (water)	0.02 % (77 °F (25 °C))
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Percent volatile	97.8 % estimated
Other information	
Partition coefficient (oil/water)	2.88

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products	Hydrogen chloride. Trace amounts of chlorine and phosgene. Carbon oxides. Halogenated materials. Carbonyl halides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Based on available data, the classification criteria are not met.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity	Not known.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

tetrachloroethylene (CAS 127-18-4) 2A Probably carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

tetrachloroethylene (CAS 127-18-4) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

tetrachloroethylene 3.4

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code D039: Waste Tetrachloroethylene
F001: Waste Halogenated Solvent - Spent Halogenated Solvent Used in Degreasing
F002: Waste Halogenated Solvent - Spent Halogenated Solvent

US RCRA Hazardous Waste U List: Reference

tetrachloroethylene (CAS 127-18-4) U210

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1950
UN proper shipping name Aerosols, poison, Limited Quantity
Transport hazard class(es)
Class 2.2
Subsidiary risk 6.1(PGIII)
Label(s) 2.2, 6.1
Packing group Not applicable.
Special precautions for user Forbidden from transportation by air.
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

IATA

UN number UN1950
UN proper shipping name Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III

Transport hazard class(es)

Class	2.2
Subsidiary risk	6.1(PGIII)

Packing group Not applicable.

ERG Code 2P

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number UN1950

UN proper shipping name AEROSOLS

Transport hazard class(es)

Class	2.2
Subsidiary risk	6.1(PGIII)

Packing group Not applicable.

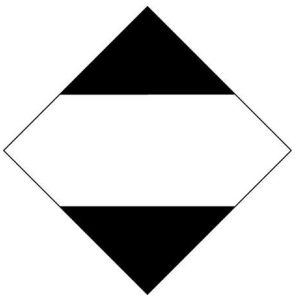
Environmental hazards

Marine pollutant Yes, but exempt from the regulations.

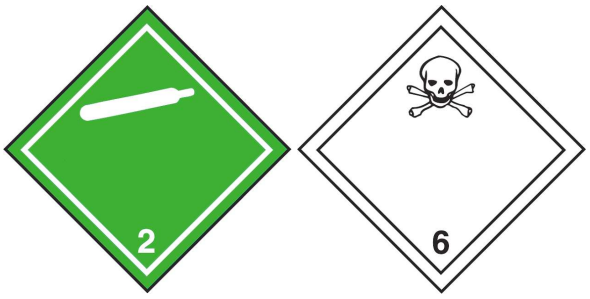
EmS Not available.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

tetrachloroethylene (CAS 127-18-4)

CERCLA Hazardous Substance List (40 CFR 302.4)

tetrachloroethylene (CAS 127-18-4)

CERCLA Hazardous Substances: Reportable quantity

tetrachloroethylene (CAS 127-18-4) 100 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

tetrachloroethylene (CAS 127-18-4)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Classified hazard categories
Gas under pressure
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
tetrachloroethylene	127-18-4	90 - 100

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

US. Massachusetts RTK - Substance List

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

US. Pennsylvania Worker and Community Right-to-Know Law

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

US. Rhode Island RTK

carbon dioxide (CAS 124-38-9)
tetrachloroethylene (CAS 127-18-4)

California Proposition 65



WARNING: Cancer - www.P65Warnings.ca.gov

California Proposition 65 - CRT: Listed date/Carcinogenic substance

carbon tetrachloride (CAS 56-23-5) Listed: October 1, 1987
tetrachloroethylene (CAS 127-18-4) Listed: April 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

tetrachloroethylene (CAS 127-18-4)

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 0 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Brake Cleaner. This product is not compliant to be sold for use in California and New Jersey. This product is compliant in all other states.

VOC content (CA)	0 %
VOC content (OTC)	0 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	03-12-2019
Revision date	09-15-2020
Prepared by	Allison Yoon
Version #	03
Further information	CRC # 491G/1002481
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..
Revision information	This document has undergone significant changes and should be reviewed in its entirety.

SAFETY DATA SHEET

1. Identification

Product identifier **Instant Cold Galvanize**

Other means of identification

Product Code No. 05048 (Item# 1003659)

Recommended use Coating

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Reproductive toxicity	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

FRS SDS Reference Library | S023 | Library page 207

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe mist or vapor. Do not apply while equipment is energized. Extinguish all flames, pilot lights, and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If exposed or concerned: Get medical advice/attention. Collect spillage.
Storage	Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
zinc		7440-66-6	40 - 50
toluene		108-88-3	20 - 30
propane		74-98-6	10 - 20
n-butane		106-97-8	5 - 10
distillates (petroleum), hydrotreated light		64742-47-8	3 - 5
isopropyl alcohol		67-63-0	1 - 3
zinc oxide		1314-13-2	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Carbon dioxide (CO2). Water spray.
Unsuitable extinguishing media	Not established.

Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, see the product label.
Conditions for safe storage, including any incompatibilities	Level 3 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	PEL	400 mg/m3 100 ppm	
isopropyl alcohol (CAS 67-63-0)	PEL	980 mg/m3 400 ppm	
propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
zinc oxide (CAS 1314-13-2)	PEL	5 mg/m3	Respirable fraction.
		5 mg/m3	Fume.
		15 mg/m3	Total dust.

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	
n-butane (CAS 106-97-8)	STEL	1000 ppm	
toluene (CAS 108-88-3)	TWA	20 ppm	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	100 mg/m3	
isopropyl alcohol (CAS 67-63-0)	STEL	1225 mg/m3	
		500 ppm	
	TWA	980 mg/m3	
		400 ppm	
n-butane (CAS 106-97-8)	TWA	1900 mg/m3	
		800 ppm	
propane (CAS 74-98-6)	TWA	1800 mg/m3	
		1000 ppm	
toluene (CAS 108-88-3)	STEL	560 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
		100 ppm	
zinc oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
isopropyl alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

toluene (CAS 108-88-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

toluene (CAS 108-88-3)	Skin designation applies.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower should be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile.

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Aerosol.

Color Gray.

Odor Aromatic.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -138.8 °F (-94.9 °C) estimated

Initial boiling point and boiling range 95 °F (35 °C) estimated

Flash point -2.2 °F (-19 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.7 %

Flammability limit - upper (%) 10.9 %

Vapor pressure 1442.5 hPa estimated

Vapor density > 1 (air = 1)

Relative density 0.77 - 0.85

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 410 °F (210 °C) estimated

Decomposition temperature Not available.

Viscosity Not available.

Percent volatile 59.6 % estimated

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Stable at normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test Results
distillates (petroleum), hydrotreated light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
isopropyl alcohol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	5030 - 7900 mg/kg
Inhalation		
LC50	Rat	16000 ppm, 4 hours
Oral		
LD50	Rat	4700 - 5800 mg/kg
propane (CAS 74-98-6)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
toluene (CAS 108-88-3)		
Acute		
Inhalation		
LC50	Rat	12.5 mg/l, 4 hours
zinc (CAS 7440-66-6)		
Acute		
Oral		
LD50	Rat	> 2000 mg/kg
zinc oxide (CAS 1314-13-2)		
Acute		
Inhalation		
LC50	Rat	> 1.79 mg/l, 4 hours (no deaths occurred)
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity May damage fertility or the unborn child.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
distillates (petroleum), hydrotreated light (CAS 64742-47-8)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	1.1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	3 mg/l, 96 hours
isopropyl alcohol (CAS 67-63-0)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
toluene (CAS 108-88-3)			
Acute			
Other	EC50	Pseudokirchnerella subcapitata	433 mg/l, 96 hours
			12.5 mg/l, 72 hours
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	6 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	5.5 mg/l, 96 hours
zinc (CAS 7440-66-6)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.56 mg/l, 96 hours
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	0.068 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.56 mg/l, 96 hours
			0.482 mg/l, 96 hours

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Components		Species	Test Results
zinc oxide (CAS 1314-13-2)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	0.098 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	1.1 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
isopropyl alcohol	0.05
n-butane	2.89
propane	2.36
toluene	2.73
Bioconcentration factor (BCF)	
toluene	90
zinc oxide	60690

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Hazardous waste code D001: Waste Flammable material with a flash point <140 F
F005: Waste Non-halogenated Solvent - Spent Non-halogenated Solvent

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

Disposal instructions This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

toluene (CAS 108-88-3)
zinc (CAS 7440-66-6)
zinc oxide (CAS 1314-13-2)

CERCLA Hazardous Substance List (40 CFR 302.4)

toluene (CAS 108-88-3)	Listed.
zinc (CAS 7440-66-6)	Listed.
zinc oxide (CAS 1314-13-2)	Listed.

CERCLA Hazardous Substances: Reportable quantity

toluene (CAS 108-88-3)	1000 LBS
zinc (CAS 7440-66-6)	1000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

toluene (CAS 108-88-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

n-butane (CAS 106-97-8)
propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

toluene (CAS 108-88-3)	6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

toluene (CAS 108-88-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

toluene (CAS 108-88-3)	594

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

isopropyl alcohol (CAS 67-63-0)	Low priority

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Classified hazard categories	Flammable (gases, aerosols, liquids, or solids) Gas under pressure Skin corrosion or irritation Reproductive toxicity Specific target organ toxicity (single or repeated exposure) Aspiration hazard

SARA 302 Extremely hazardous substance

Not listed.

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
toluene	108-88-3	20 - 30
zinc	7440-66-6	40 - 50
zinc oxide	1314-13-2	1 - 3

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

isopropyl alcohol (CAS 67-63-0)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
toluene (CAS 108-88-3)
zinc (CAS 7440-66-6)
zinc oxide (CAS 1314-13-2)

US. Massachusetts RTK - Substance List

isopropyl alcohol (CAS 67-63-0)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
toluene (CAS 108-88-3)
zinc (CAS 7440-66-6)
zinc oxide (CAS 1314-13-2)

US. Pennsylvania Worker and Community Right-to-Know Law

distillates (petroleum), hydrotreated light (CAS 64742-47-8)
isopropyl alcohol (CAS 67-63-0)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
toluene (CAS 108-88-3)
zinc (CAS 7440-66-6)
zinc oxide (CAS 1314-13-2)

US. Rhode Island RTK

isopropyl alcohol (CAS 67-63-0)
n-butane (CAS 106-97-8)
propane (CAS 74-98-6)
toluene (CAS 108-88-3)
zinc (CAS 7440-66-6)

California Proposition 65



WARNING: Reproductive Harm - www.P65Warnings.ca.gov

California Proposition 65 - CRT: Listed date/Developmental toxin

toluene (CAS 108-88-3) Listed: January 1, 1991

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

isopropyl alcohol (CAS 67-63-0)
n-butane (CAS 106-97-8)
toluene (CAS 108-88-3)
zinc (CAS 7440-66-6)

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	50.2 %

Aerosol coatings (40 CFR 59, Subpt. E)	Compliant

State

Aerosol coatings	This product is regulated as a Metallic Coating. This product is compliant for sale in all 50 states.
Maximum incremental reactivity (MIR)	1.17

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	11-19-2013
Revision date	07-24-2018
Prepared by	Allison Yoon
Version #	03
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..
Revision information	This document has undergone significant changes and should be reviewed in its entirety.

SAFETY DATA SHEET

1. Identification

Product identifier **QD® Electronic Cleaner - 11 oz**

Other means of identification

Product Code No. 05103 (Item# 1003719)

Recommended use Electronic cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone 800-556-5074

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)

Website crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not apply while equipment is energized. Extinguish all flames, pilot lights, and heaters. Vapors will accumulate readily and may ignite. Use only outdoors or in a well-ventilated area. Maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist/vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
naphtha (petroleum), hydrotreated light		64742-49-0	70 - 80
1,1-difluoroethane	HFC-152a	75-37-6	20 - 30

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

General fire hazards	Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Remove all possible sources of ignition in the surrounding area. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Prevent product from entering drains. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, see the product label.
Conditions for safe storage, including any incompatibilities	Level 3 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in tightly closed container. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	PEL	400 mg/m3
		100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	TWA	400 mg/m3
		100 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1-difluoroethane (CAS 75-37-6)	TWA	2700 mg/m3
		1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower should be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC). Viton/butyl.

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Aerosol.

Color Colorless.

Odor Alcoholic.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 137 °F (58.3 °C) estimated

Flash point -0.4 °F (-18.0 °C) estimated

Evaporation rate Very fast.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 1 % estimated

Explosive limit - upper (%) 7.8 % estimated

Vapor pressure Not available.

Vapor pressure temp. 68 °F (20 °C)

Vapor density >1 (air = 1)

Relative density 0.72 estimated

Solubility(ies)

Solubility (water) Negligible.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 550.4 °F (288 °C) estimated

Decomposition temperature Not available.

Viscosity Not available.

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10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Aluminum.
Hazardous decomposition products	Aldehydes. Carbon oxides. Carbonyl fluoride. Fluorocarbons. Formaldehyde. Hydrocarbon fumes and smoke. Hydrogen fluoride.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test Results
1,1-difluoroethane (CAS 75-37-6)		
Acute		
Inhalation		
LC50	Mouse	369000 ppm, 2 Hours
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
Vapor		
LC50	Rat	> 5.2000000000000002 mg/l, 4 hours
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	Toxic to aquatic life with long lasting effects.
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	

Partition coefficient n-octanol / water (log Kow)

1,1-difluoroethane	0.75

Bioconcentration factor (BCF)

naphtha (petroleum), hydrotreated light	10 - 2500

Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001 (See 40 CFR Part 261.20 – 261.33). Full or partially-full aerosol cans can be treated as universal waste. Empty container can be recycled. Contents under pressure. Do not incinerate sealed containers. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	Possible RCRA waste code includes: D001: Waste Flammable material with a flash point <140 F However, it is the generator's responsibility to determine the proper classification and disposal method at the time of disposal.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not assigned.
Environmental hazards	
Marine pollutant	Yes, but exempt from regulations.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

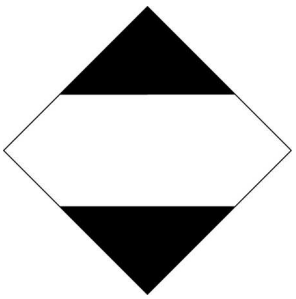
UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not assigned.

ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not assigned.
Environmental hazards	
Marine pollutant	Yes, but exempt from regulations.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT; IMDG



IATA



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

1,1-difluoroethane (CAS 75-37-6)

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Classified hazard categories
Flammable (gases, aerosols, liquids, or solids)
Gas under pressure
Skin corrosion or irritation
Serious eye damage or eye irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard
Hazard not otherwise classified (HNOC)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha (CAS 64742-49-0)

US. New Jersey Worker and Community Right-to-Know Act

1,1-DIFLUOROETHANE (CAS 75-37-6)
NAPHTHA (CAS 64742-49-0)

US. Massachusetts RTK - Substance List

Difluoroethane (CAS 75-37-6)
Naphtha (CAS 64742-49-0)

US. Pennsylvania Worker and Community Right-to-Know Law

Naphtha (CAS 64742-49-0)

US. Rhode Island RTK

VM & P NAPTHA (CAS 64742-49-0)

California Proposition 65



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

California Proposition 65 - CRT: Listed date/Carcinogenic substance

acetaldehyde (CAS 75-07-0)	Listed: April 1, 1988
ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004
methyl isobutyl ketone (CAS 108-10-1)	Listed: November 4, 2011

California Proposition 65 - CRT: Listed date/Developmental toxin

methanol (CAS 67-56-1)	Listed: March 16, 2012
methyl isobutyl ketone (CAS 108-10-1)	Listed: March 28, 2014
toluene (CAS 108-88-3)	Listed: January 1, 1991

California Proposition 65 - CRT: Listed date/Male reproductive toxin

n-hexane (CAS 110-54-3)	Listed: December 15, 2017

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 75 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products	This product is regulated as an Electronic Cleaner. This product is compliant for use in all 50 states.
VOC content (CA)	75 %
VOC content (OTC)	75 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	03-22-2019
Revision date	08-18-2023
Prepared by	Joshua Weir
Version #	03
Further information	CRC # 985/1002984
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..
Revision information	Product and Company Identification: Product and Company Identification Hazard(s) identification: Hazard statement Hazard(s) identification: Prevention Composition / Information on Ingredients: Disclosure Overrides Physical & Chemical Properties: Multiple Properties Stability and reactivity: Hazardous decomposition products Disposal considerations: Disposal instructions Disposal considerations: Hazardous waste code Transport Information: Proper Shipping Name/Packing Group GHS: Acute Toxicity Estimate

SAFETY DATA SHEET

1. Identification

Product identifier **Technician Grade Dielectric Grease - 3.3 oz**

Other means of identification

Product Code No. 05113 (Item# 1003734)

Recommended use Lubricates, protects and insulates electrical connections

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards Gases under pressure — Compressed gas

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Contains gas under pressure; may explode if heated.

Precautionary statement

Prevention Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.

Disposal Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
polydimethylsiloxane		63148-62-9	80 - < 90

Chemical name	Common name and synonyms	CAS number	%
amorphous fumed silica		112945-52-5	5 - < 10
nitrogen		7727-37-9	1 - < 3
polytetrafluoroethylene		9002-84-0	1 - < 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion If swallowed, do NOT induce vomiting. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water spray. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

General fire hazards Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Wipe up with absorbent material (e.g. cloth, fleece, vermiculite). Sweep up or vacuum up spillage and collect in suitable container for disposal. The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

Environmental precautions Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. For product usage instructions, see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120 °F/49 °C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in tightly closed original container. Store in a well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
amorphous fumed silica (CAS 112945-52-5)	TWA	0.8 mg/m3
		20 mppcf

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
amorphous fumed silica (CAS 112945-52-5)	TWA	6 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Occupational Exposure Limits are not relevant to the current physical form of the product.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Aerosol. Paste.

Color Off-white.

Odor Mild.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range > 392 °F (> 200 °C)

Flash point > 572 °F (> 300 °C) Cleveland Open Cup

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%)	Not available.
Vapor pressure	156152.2 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.94
Solubility(ies)	
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	401 °F (205 °C)
Viscosity	Not available.
Percent volatile	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the decomposition temperature. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride. Contact with incompatible materials.
Incompatible materials	Fluorine. Chlorine.
Hazardous decomposition products	Hydrogen fluoride. Perfluoroisobutylene. Perfluorinated acid fluorides. Formaldehyde. Silicone dioxide. Traces of incompletely burned carbon compounds.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of fumes may result in metal fume fever, a flu-like illness with symptoms of metallic taste, fever and chills, aches, chest tightness, and cough.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
amorphous fumed silica (CAS 112945-52-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg
polydimethylsiloxane (CAS 63148-62-9)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	> 10000 mg/kg

Components	Species	Test Results
polytetrafluoroethylene (CAS 9002-84-0)		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

amorphous fumed silica (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans.
polytetrafluoroethylene (CAS 9002-84-0)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not expected to be an aspiration hazard.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
amorphous fumed silica (CAS 112945-52-5)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Zebra danio (Danio rerio)	> 10000 mg/l, 96 hours
polydimethylsiloxane (CAS 63148-62-9)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

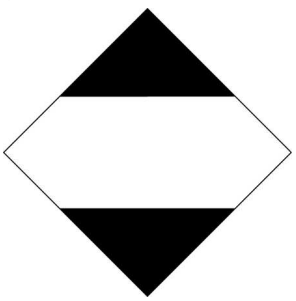
IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
ERG Code	2L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT; IMDG



IATA



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Massachusetts RTK - Substance List

amorphous fumed silica (CAS 112945-52-5)

US. Pennsylvania Worker and Community Right-to-Know Law

amorphous fumed silica (CAS 112945-52-5)
polytetrafluoroethylene (CAS 9002-84-0)

US. Rhode Island RTK

polytetrafluoroethylene (CAS 9002-84-0)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	< 1 %
Consumer products (40 CFR 59, Subpt. C)	Not regulated

State

Consumer products	Not regulated
VOC content (CA)	< 1 %
VOC content (OTC)	< 1 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	12-05-2019
Prepared by	Allison Yoon
Version #	01
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..
Revision information	Product and Company Identification: Product Codes Hazard(s) identification: Prevention Composition / Information on Ingredients: Ingredients Handling and storage: Precautions for safe handling Handling and storage: Conditions for safe storage, including any incompatibilities Physical & Chemical Properties: Multiple Properties Toxicological information: Carcinogenicity Ecological Information: Ecotoxicity Transport Information: Proper Shipping Name/Packing Group Regulatory Information: VOC Regulations Regulatory information: California Proposition 65 Other information, including date of preparation or last revision: Disclaimer GHS: Classification

Safety Data Sheet

SECTION 1 IDENTIFICATION

Delo Syn-Trans XE SAE 75W-90

Recommended Use: Manual Transmission Fluid
Restrictions on Use: Consult supplier when used other than those specified.
Other means of identification: Not applicable
Product Number(s): 223079
Company Identification
Chevron Products Company
a division of Chevron U.S.A. Inc.
1400 Smith Street
Houston, TX 77002
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:

- Reproductive toxicant (fertility): Category 2.
- Target organ toxicant (repeated exposure): Category 1.
- Acute aquatic toxicant: Category 2.
- Chronic aquatic toxicant: Category 3.



Signal Word: Danger
Health Hazards:
- Suspected of damaging fertility.
- Causes damage to organs (Lymphatic Tissue) through prolonged or repeated exposure.

Environmental Hazards:

- Toxic to aquatic life.
- Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:
Prevention:
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe fume, gas, mist, vapours, or spray.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- Wear protective gloves, protective clothing, eye protection, and face protection.

Response:
- IF exposed or concerned: Get medical advice or attention.

Storage:
- Store locked up.

Disposal:
- Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	80939-62-4	1 - 5 %weight
Distillates, hydrotreated heavy paraffinic	64742-54-7	0.1 - 5 %weight
Distillates, solvent-dewaxed heavy paraffinic	64742-65-0	0.1 - 5 %weight
01154100-5281P	Trade secret	0.1 - < 1 %weight
2,6-di-tert-butylphenol	128-39-2	0.1 - < 1 %weight
Ethanol, 2,2'-iminobis-, N-tallow alkyl derivs.	61791-44-4	0.1 - < 1 %weight

Note that the chemical identity of some or all of the above components is considered confidential business information and is being withheld as permitted by 29 CFR 1910.1200 and various State Right-To-Know Laws.

SECTION 4 FIRST AID MEASURES

Description of first aid measures
Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To further remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed
IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.
Skin: High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.
Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a synthetic hydrocarbon oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER HEALTH EFFECTS:
Reproduction and Birth Defects: Contains material that may cause adverse reproductive effects if swallowed based on animal data.
Target Organs: Contains material that may cause damage to organs following repeated exposure. Lymphatic Tissue See Section 11 for additional information. Risk depends on duration and level of exposure.

Indication of any immediate medical attention and special treatment needed
Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
UNSUITABLE EXTINGUISHING MEDIA: No data available
Unusual Fire Hazards: Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Nitrogen, Phosphorus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Observe all relevant local and international regulations. Eliminate all sources of ignition in vicinity of spilled material. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to

prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Wash thoroughly after handling. Keep out of the reach of children.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

ENGINEERING CONTROLS:
Use general ventilation, local exhaust ventilation, or a combination of both.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon

operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	15
Neoprene	0.61	7
Nitrile	0.8	7
Polyvinyl Chloride (PVC)	1.1	7
Viton Butyl	0.3	30

Respiratory Protection: A site-specific risk assessment should be conducted by an Occupational Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved respirator such as:

Air purifying respirator -
If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.
Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).
Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).
Refer to respirator manufacturers to obtain service life of cartridge / filter.

Positive pressure air-supplying respirator -
If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

Occupational Exposure Limits:

Component	Agency	Form	TWA	STEL	Ceiling	Notation
Distillates, hydrotreated heavy paraffinic	ACGIH	--	5 mg/m3	10 mg/m3	--	--
Distillates, solvent-dewaxed heavy paraffinic	ACGIH	--	5 mg/m3	10 mg/m3	--	--
Distillates, hydrotreated heavy paraffinic	ACGIH	Inhalable fraction	5 mg/m3	--	--	--
Distillates, solvent-dewaxed heavy paraffinic	ACGIH	Inhalable fraction	5 mg/m3	--	--	--
Distillates, hydrotreated heavy paraffinic	OSHA Z-1	--	5 mg/m3	--	--	--
Distillates, solvent-dewaxed heavy paraffinic	OSHA Z-1	--	2000 mg/m3	--	--	--
Distillates, hydrotreated heavy paraffinic	OSHA Z-1	Mist	5 mg/m3	--	--	--
Distillates, solvent-dewaxed heavy paraffinic	OSHA Z-1	Mist	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Amber
Physical State: Liquid
Odor: Faint or Mild
Odor Threshold: Not tested/Not Measured
pH: Not tested/Not Measured
Vapor Pressure: Not tested/Not Measured
Relative Vapor Density: Not tested/Not Measured
Initial Boiling Point: Not tested/Not Measured
Solubility: Not tested/Not Measured
Freezing Point: Not tested/Not Measured
Melting Point: Not tested/Not Measured
Specific Gravity: 0.825 - 0.875 @ 15.6°C (60.1°F)
Particle Characteristics: Not applicable
Density: 7.09 lb/gal @ 15.6°C (60°F) (Typical)
Kinematic Viscosity: 95.1 mm2/s @ 40°C (104°F) (Typical)
Coefficient of Therm. Expansion / °F: Not tested/Not Measured
Evaporation Rate: Not tested/Not Measured
Decomposition temperature: Not tested/Not Measured
Partition coefficient n-octanol/water (logarithmic value): Not tested/Not Measured

FLAMMABLE PROPERTIES:
Flammability (solid, gas): Not Applicable

Flashpoint: (Cleveland Open Cup) 190 °C (374 °F) (Minimum)
Autoignition: Not tested/Not Measured
Flammability (Explosive) Limits (% by volume in air): Lower: Not tested/Not Measured Upper: Not tested/Not Measured

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: None known (None expected)

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Corrosion/Irritation: The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Sensitization: The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The material is not considered an oral toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Carcinogenicity: The material is not considered a carcinogen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Reproductive Toxicity: This material is suspected of damaging fertility. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Single Exposure: The material is not considered a target organ toxicant (single exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Repeated Exposure: This material causes damage to organs through prolonged or repeated exposure. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Aspiration Hazard: The material is not considered an aspiration hazard.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.
The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is not expected to be readily biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Partition coefficient n-octanol/water (logarithmic value): No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health

authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	05=MA RTK
01-2A=IARC Group 2A	06=NJ RTK
01-2B=IARC Group 2B	07=PA RTK
02=NTP Carcinogen	08-1=TSCA 5(e)
03=EPCRA 313	08-2=TSCA 12(b)
04=CA Proposition 65	

The following components of this material are found on the regulatory lists indicated.
Distillates, hydrotreated heavy paraffinic 05, 06, 07

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Automatic transmission fluid)

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the American Coatings Association (ACA) (for HMIS ratings).

REVISION STATEMENT:
SECTION 01 - Health Emergency information was modified.
SECTION 02 - Hazard Statements information was modified.
SECTION 02 - Health Classification information was modified.
SECTION 02 - Precautionary Statements information was added.
SECTION 02 - Precautionary Statements information was modified.
SECTION 03 - Composition information was modified.
SECTION 04 - Delayed Health Effects - Reproductive Toxicity information was modified.
SECTION 04 - First Aid - Skin information was modified.
SECTION 07 - Precautionary Measures information was modified.
SECTION 09 - Physical/Chemical Properties information was modified.
SECTION 11 - Reproductive Toxicity information was modified.
SECTION 15 - SARA 311 EPCRA Score information was modified.
SECTION 16 - HMIS Rating information was modified.
SECTION 16 - NFPA Rating information was modified.

Revision Date: June 30, 2026

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	PNOS - Particles Not Otherwise Specified

Prepared according to the 29 CFR 1910.1200 (2024) by Chevron.

The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.

SAFETY DATA SHEET

SECTION 1 IDENTIFICATION

PRODUCT

Product Name: **DIESEL EXHAUST FLUID**
Product Description: Chemical Mixture
SDS Number: 20459
Product Code: 351010108210
Intended Use: Reducing Agent

COMPANY IDENTIFICATION

Supplier: **Imperial Oil Downstream**
P.O. Box 2480, Station M
Calgary, ALBERTA T2P 3M9 Canada

24 Hour Emergency Telephone	1-866-232-9563
Transportation Emergency Phone Number	1-866-232-9563
Product Technical Information	1-800-268-3183
Supplier General Contact	1-800-567-3776

SECTION 2 HAZARD IDENTIFICATION

This material is considered to be NON-HAZARDOUS according to regulatory guidelines.

This product has been classified in accordance with hazard criteria of the Hazardous Products Regulations (HPR) SOR/2015-17 and the SDS contains all the information required by the HPR SOR/2015-17.

Other hazard information:

Health Hazards Not Otherwise Classified: None as defined under HPR SOR/2015-17.

Physical Hazards Not Otherwise Classified: None as defined under HPR SOR/2015-17.

PHYSICAL / CHEMICAL HAZARDS

No significant hazards.

HEALTH HAZARDS

May be irritating to the eyes, nose, throat, and lungs. Mildly irritating to skin with prolonged exposure.

ENVIRONMENTAL HAZARDS

Expected to be harmful to aquatic organisms.

NFPA Hazard ID: Health: 1 Flammability: 0 Reactivity: 0

HMIS Hazard ID: Health: 1 Flammability: 0 Reactivity: 0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*	GHS Hazard Codes
AMMONIA	7664-41-7	0.1 - < 1%	H221, H280, H331, H314(1B), H400(M factor 1)
UREA	57-13-6	30 - 50%	None

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4 FIRST-AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

SECTION 5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Exposure to fire can generate toxic fumes.

Hazardous Combustion Products: Ammonia, Nitrogen oxides, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >100°C (212°F) [Estimated]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. Ventilate the area. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Water Spill: Stop leak if you can do so without risk. Warn other shipping. Material will sink. This product emulsifies, disperses or is miscible in water. Remove material, as much as possible, using mechanical equipment.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Remove debris in path of spill prior to oiling and remove contaminated debris from shoreline and water surface. Dispose of according to local regulations. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator.

STORAGE

The type of container used to store the material may affect static accumulation and dissipation. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames and high temperatures. Do not store in open or unlabelled containers. Keep container tightly closed and dry.
Storage Temperature: -5°C (23°F) - 30°C (86°F)

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Substance Name	Form	Limit/Standard			Note	Source
AMMONIA		STEL	35 ppm			ACGIH
AMMONIA		TWA	25 ppm			ACGIH
UREA	Total particulate.	TWA	10 mg/m3			OARS WEEL

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator

selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practise good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Colour: Colourless
Odour: Mild Ammonia-like
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 20 °C): 1.09
Flammability (Solid, Gas): N/A
Flash Point [Method]: >100°C (212°F) [Estimated]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D
Boiling Point / Range: > 103°C (217°F)

Decomposition Temperature: N/D
Vapour Density (Air = 1): N/D
Vapour Pressure: N/D
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/D
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water: Complete
Viscosity: N/D
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: -11°C (12°F)
Melting Point: N/D

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Heat, sparks, flame, and build up of static electricity.

MATERIALS TO AVOID: Calcium Hypochlorite, Nitric acid, Perchlorates, Sodium hypochlorite, Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.
Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Mildly irritating to skin with prolonged exposure. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitisation	

Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer.
Aspiration: No end point data for material.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure. Based on assessment of the components.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

TOXICITY FOR SUBSTANCES

NAME	ACUTE TOXICITY
AMMONIA	Inhalation Lethality: LC50 2000 ppm (Rat); Oral Lethality: LD 50 0.35 g/kg (Rat)

OTHER INFORMATION

For the product itself:

Repeated and/or prolonged exposure may cause irritation to the skin, eyes, or respiratory tract.

CMR Status: None.

--REGULATORY LISTS SEARCHED--

1 = IARC 1
2 = IARC 2A
3 = IARC 2B
4 = ACGIH ALL
5 = ACGIH A1
6 = ACGIH A2

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Expected to be harmful to aquatic organisms.

MOBILITY

Material -- Expected to remain in water or migrate through soil.

PERSISTENCE AND DEGRADABILITY
Biodegradation:
Material -- Expected to be readily biodegradable.

BIOACCUMULATION POTENTIAL
Majority of components -- Potential to bioaccumulate is low.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS
Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION
Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (TDG): Not Regulated for Land Transport

LAND (DOT): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

WHMIS Classification: Not controlled

CEPA: All components of this product are either on the Domestic Substance List (DSL) or are exempt.

Listed or exempt from listing/notification on the following chemical inventories: DSL, TSCA

The Following Ingredients are Cited on the Lists Below: None.

--REGULATORY LISTS SEARCHED--

1 = TSCA 4	3 = TSCA 5e	5 = TSCA 12b
2 = TSCA 5a2	4 = TSCA 6	6 = NPRI

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):
H221: Flammable gas; Flammable Gas, Cat 2
H280: Contains gas under pressure; may explode if heated; Pressurized Gas
H314(1B): Causes severe skin burns and eye damage; Skin Corr/Irritation, Cat 1B
H331: Toxic if inhaled; Acute Tox Inh, Cat 3
H400: Very toxic to aquatic life; Acute Env Tox, Cat 1

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Updates made in accordance with implementation of GHS requirements.

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SAFETY DATA SHEET

Disposable Polybag

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH Regulations

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Disposable Polybag
CAS#:	Not Applicable
SUPPLIER/MANUFACTURER'S NAME:	**The Scensible Source Co. LLC**
ADDRESS:	P.O.Box 22991, Rochester, New York 14692 USA
EMERGENCY PHONE:	**TOLL-FREE in USA/Canada** 866-231-7050
BUSINESS PHONE:	866-231-7050 (Product Information)
WEB SITE:	www.scensiblesource.com
E-MAIL ADDRESS:	scensiblesource@gmail.com
DATE OF PREPARATION:	November 18, 2011
DATE OF LAST REVISION:	New

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is .5 mil HDPE bag with an antimicrobial, oxo-biodegradable and fragrance additive.
HEALTH HAZARDS: This product is not expected to present any health hazards.
FLAMMABILITY: This product is not flammable
ENVIRONMENTAL EFFECTS: The Environmental effects of this product have not been investigated, however it is not expected to create any adverse effects in the environment.

US DOT SYMBOLS	CANADA (WHMIS) SYMBOLS	EUROPEAN and (GHS) Hazard Symbols
		None
Non-Regulated	Not Controlled	Signal Word: **None**

EU LABELING AND CLASSIFICATION:

EU DANGEROUS PREPARATIONS DIRECTIVE (DPD) LABELING AND CLASSIFICATION: This product does not meet the definition of any hazard class, as defined by the European Union Council Directives 67/548/EEC and 1999/445/EC and subsequent Directives. For information on classification under CLP Regulation (EC) 1271/2008, please refer to section 16 (Other Information).

This product is classified as an "article" according to Title 29 of the Code of Federal Regulations, OSHA Part 1910.1200 and REACH regulations.

"Article means a manufactured item other than a fluid or particle, which is formed to a specific shape or design during manufacture which has end use function dependent in whole or in part upon its shape or design during end use, and which under normal conditions of use does not release more than very small quantities or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees."

This product is stable, and poses no immediate hazard to health.

HAZARDS DISCLOSURE: This product does not contain known hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200. As defined under Sara 311 and 312, this product does not contain known hazardous materials.

GHS Hazard Classification(s):
None

Hazard Statement(s):
None

Precautionary Statement(s):
None

EU HAZARD CLASSIFICATION PER DIRECTIVE 1999/45/EC:
None

Risk Phrases:
None

Safety Phrases:
None

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE:

EYE: Contact may cause mild irritation including stinging, watering and redness.

SKIN: Contact is not expected to cause skin irritation.

INHALATION: Not expected to cause respiratory irritation.

INGESTION: Ingestion may cause irritation of the digestive tract.

CHRONIC: None known

TARGET ORGANS: ACUTE: None known CHRONIC: None known

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Polyethylene	9008-88-4	Not Found in ESIS	Not Listed	>97%	HAZARD CLASSIFICATION: NONE RISK PHRASES: NONE
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard *JIS Z 7250: 2000*.

SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label, bill of lading and/or MSDS to health professional with contaminated individual.

EYE CONTACT: No first aid is normally needed. If product enters the eyes, open eyes while under gentle running water. Remove contact lenses if worn. Seek medical attention if irritation persists.

SKIN CONTACT: No first aid is normally needed. Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists.

INHALATION: No harmful effects expected from normal use. If exposure to decomposition products occurs and irritation develops or if breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing dificulty continues.

INGESTION: No adverse effects are expected, however if product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable

AUTOIGNITION TEMPERATURE: >650°F

FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not Applicable Upper (UEL): Not Applicable

FIRE EXTINGUISHING MATERIALS: Use water fog, foam, dry chemical or carbon dioxide (CO_2) to extinguish flames.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

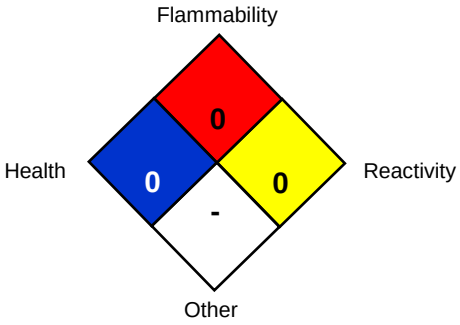
Explosion Sensitivity to Mechanical Impact: Not Sensitive.

Explosion Sensitivity to Static Discharge: Not Sensitive

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done

without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD (BLUE)	0
FLAMMABILITY HAZARD (RED)	0
PHYSICAL HAZARD (YELLOW)	0

PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8

For Routine Industrial Use and Handling Applications

Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate **3** = Serious **4** = Severe * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Clean up spilled bags promptly to avoid slipping hazard. Collect for re-use or disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: Wash thoroughly after handling this product.

STORAGE AND HANDLING PRACTICES: Store containers in a cool, dry location. Do not store at temperatures above 120°F (49°C)

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA	SWA
Polyethylene	9008-88-4	Not Listed	Not Listed	Not Listed

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: General ventilation should be adequate for normal use.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Not normally required under normal use conditions. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Not normally required under normal use conditions. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Not normally required under normal use conditions. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
APPEARANCE & ODOR:	Blue or pink with a slight fragrance
ODOR THRESHOLD (PPM):	Slight
VAPOR PRESSURE (mmHg):	Not Applicable
VAPOR DENSITY (AIR=1):	Not Applicable
EVAPORATION RATE (nBuAc = 1):	Not Applicable
BOILING POINT (C°):	Not Applicable
FREEZING POINT (C°):	Not Applicable
pH:	Not Applicable
SPECIFIC GRAVITY 20°C: (WATER =1)	0.92 – 0.98
SOLUBILITY IN WATER (%)	Insoluble

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: Material does not decompose under normal storage conditions. When heated to decomposition this product produces carbon dioxide and carbon monoxide. This product has a oxo-biodegradable additive which aids disposal.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizers, acids and bases.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials. Excessive heat and high energy sources of ignition.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data is not available for this product:
No LD/LC 50 Data Available

SUSPECTED CANCER AGENT: This product does not contain an ingredient(s) that is found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, or suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: No adverse effects are expected from normal contact.

REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

ADDITIONAL INFORMATION: None found

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No data is available at this time.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product is an inert plastic product. No adverse environmental effects are expected from normal use or disposal.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on this product's effects on aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Recover or recycle if possible. Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Non-Regulated Material

HAZARD CLASS NUMBER and DESCRIPTION: : None

UN IDENTIFICATION NUMBER: None

PACKING GROUP: None

DOT LABEL(S) REQUIRED: None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): None

MARINE POLLUTANT: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

This product is not classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is not classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: NONE

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: No Chronic Health: No Fire: No Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product does not contain ingredient(s) which are on the California Proposition 65 lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is categorized as Not Controlled, as per the Controlled Product Regulations

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:

Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed or exempt on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or Exempt
Australian Inventory of Chemical Substances (AICS):	Listed or Exempt
Korean Existing Chemicals List (ECL):	Listed or Exempt
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or Exempt
Philippines Inventory if Chemicals and Chemical Substances (PICCS):	Listed or Exempt
Swiss Giftliste List of Toxic Substances:	Listed or Exempt
U.S. TSCA:	Listed or Exempt

SECTION 16 - OTHER INFORMATION

Disclaimer: The information in this document is believed to be correct as of the date issued. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE**. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

SAFETY DATA SHEET
DOW SILICONES CORPORATION

Product name: DOWSIL™ 3 Additive

Issue Date: 10/16/2026
Print Date: 10/17/2026

DOW SILICONES CORPORATION encourages and expects you to read and understand the entire Safety Data Sheet (SDS), as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOWSIL™ 3 Additive

Recommended use of the chemical and restrictions on use
Identified uses: Additives

COMPANY IDENTIFICATION
DOW SILICONES CORPORATION
2211 H.H. DOW WAY
MIDLAND MI 48674-0001
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 1 800 424 9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification for the product as supplied
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Flammable liquids - Category 2
Skin irritation - Category 2
Reproductive toxicity - Category 2
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2 - Inhalation
Aspiration hazard - Category 1

Label elements
Hazard pictograms

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Signal word: **DANGER!**

Hazards

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs (Nervous system) through prolonged or repeated exposure if inhaled.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P331	Do NOT induce vomiting.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P370 + P378	In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.

Other hazards
Static-accumulating flammable liquid.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone resin solution
This product is a mixture.

Nº	Component	CASRN	Concentration	US Unique Identifier (internal)
0001	Toluene	108-88-3	>= 85.0 - <= 95.0 %	Not applicable

4. FIRST AID MEASURES

Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed:
May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure if inhaled.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. Alcohol consumed before or after exposure may increase adverse effects. The decision of whether to induce vomiting or

not should be made by a physician. If lavage is performed, suggest endotracheal and esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam. Carbon dioxide (CO2). Dry sand.

Unsuitable extinguishing media: High volume water jet. Do not use direct water stream..

Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon oxides. Silicon oxides.

Unusual Fire and Explosion Hazards: Flash back possible over considerable distance.. Exposure to combustion products may be a hazard to health.. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.. Flammable mixtures may exist within the vapor space of containers at room temperature.. Closed containers may rupture via pressure build-up when exposed to fire or extreme heat.. Vapours may form explosive mixtures with air..

Advice for firefighters

Fire Fighting Procedures: Use water spray to cool unopened containers.. Evacuate area.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Do not use a solid water stream as it may scatter and spread fire..
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Remove all sources of ignition. Ventilate the area. Use personal protective equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Do not release the product to the aquatic environment above defined regulatory levels Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not get on skin or clothing. Do not breathe vapours or spray mist. Avoid contact with eyes. Do not swallow. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings evenafter container is emptied.
Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it isnecessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

Conditions for safe storage: Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases.
Unsuitable materials for containers**:** None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Toluene	ACGIH	TWA	20 ppm
	Further information: Ototoxicant; A4: Not classifiable as a human carcinogen		
	OSHA Z-2	TWA	200 ppm
	OSHA Z-2	CEIL	300 ppm
	OSHA Z-2	Peak	500 ppm

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis

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Toluene	108-88-3	Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g creatinine	ACGIH BEI

Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge, type A (boiling point >65 ºC).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid
Color	colourless
Odor	solvent-like
Odor Threshold	No data available
pH	Not applicable, substance/mixture is non-polar/aprotic
Melting point/freezing point	
Melting point/ range	No data available
Freezing point	No data available
Boiling point, initial boiling point and boiling range	
Boiling point (760 mmHg)	> 100 °C (> 212 °F)
Flash point	**closed cup** 7 °C (45 °F)
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability	
Flammability (solid, gas)	Not applicable
Flammability (liquids)	No data available
Upper/lower flammability or explosive limits	
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative vapour density	
Relative Vapor Density (air = 1)	No data available
Density and / or relative density	
Relative Density (water = 1)	0.9
Solubility(ies)	
Water solubility	No data available
Partition coefficient: n-octanol/water (log value)	No data available
Auto-ignition temperature	No data available

Decomposition temperature	No data available
Kinematic Viscosity	1.0 mm2/s at 25 °C (77 °F)
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle characteristics	
Particle size	not applicable

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents. Vapours may form explosive mixture with air. Highly flammable liquid and vapour.

Conditions to avoid: Avoid static discharge. Heat, flames and sparks.

Incompatible materials: Avoid contact with oxidizing materials.

Hazardous decomposition products:
Decomposition products can include and are not limited to: Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data are available.

Information on likely routes of exposure
Inhalation, Eye contact, Skin contact, Ingestion.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute Toxicity Endpoints:
Not classified based on available information.

Acute oral toxicity

Information for the Product:

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, > 5,000 mg/kg Estimated.

Information for components:

Toluene
LD50, Rat, male, 5,580 mg/kg

Acute dermal toxicity

Information for the Product:

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):
LD50, > 2,000 mg/kg Estimated.

Information for components:

Toluene
LD50, Rabbit, 12,267 mg/kg

Acute inhalation toxicity

Information for the Product:

Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Alcohol consumption and exertion may increase the adverse effects of toluene.

As product: The LC50 has not been determined.

Information for components:

Toluene
LC50, Rat, male, 4 Hour, vapour, 25.7 mg/l

LC50, Rat, female, 4 Hour, vapour, 30 mg/l

LC50, Rat, female, 4 Hour, vapour, 19 mg/l

Skin corrosion/irritation

Causes skin irritation.

Information for the Product:

Based on information for component(s):
Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause moderate skin irritation with local redness.
May cause drying and flaking of the skin.

Information for components:

Toluene
Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause moderate skin irritation with local redness.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

Not classified based on available information.

Information for the Product:

Based on information for component(s):
May cause slight eye irritation.
May cause slight temporary corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.
Vapor may cause lacrimation (tears).

Information for components:

Toluene
May cause slight eye irritation.
May cause slight temporary corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.
Vapor may cause lacrimation (tears).

Sensitization

For skin sensitization:
Not classified based on available information.

For respiratory sensitization:
Not classified based on available information.

Information for the Product:

For skin sensitization:
Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:
No specific, relevant data available for assessment.

Information for components:

Toluene
For skin sensitization:
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

May cause drowsiness or dizziness.

Information for the Product:

Product test data not available.

Information for components:

Toluene
May cause drowsiness or dizziness.
Route of Exposure: Inhalation
Target Organs: Central nervous system

Aspiration Hazard

May be fatal if swallowed and enters airways.

Information for the Product:

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Information for components:

Toluene
May be fatal if swallowed and enters airways.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

May cause damage to organs (Nervous system) through prolonged or repeated exposure if inhaled.

Information for the Product:

Product test data not available.

Information for components:

Toluene
In animals, effects have been reported on the following organs:
Central nervous system.
Excessive exposure may cause neurologic signs and symptoms.
Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations.
Intentional misuse by deliberately inhaling toluene may cause nervous system damage, loss of sensory organs (Hearing, Vision and Smell), liver, heart, lungs and kidney effects and death.

Carcinogenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Toluene
Did not cause cancer in laboratory animals.

Teratogenicity

Suspected of damaging fertility or the unborn child.

Information for the Product:

Product test data not available.

Information for components:

Toluene
In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Information for the Product:

Product test data not available.

Information for components:

Toluene
In animal studies, did not interfere with reproduction.

Mutagenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Toluene
The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data are available.

Toxicity

Information for the Product:

Product test data not available.

Information for components:

Toluene

Acute toxicity to fish
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 5.8 mg/l, OECD Test Guideline 203
LC50, Oncorhynchus kisutch (coho salmon), flow-through test, 96 Hour, 5.5 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 24 Hour, 7 mg/l, OECD Test Guideline 202
LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 3.78 mg/l

Acute toxicity to algae/aquatic plants
EC50, Chlorella sp, 3 Hour, 134 mg/l
NOEC, Skeletonema costatum (marine diatom), 72 Hour, Biomass, 10 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, Nitrosomonas sp., Static, 24 Hour, Respiration rates., 84 mg/l

Chronic toxicity to fish
NOEC, Oncorhynchus kisutch (coho salmon), flow-through test, 40 d, growth, 1.39 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Ceriodaphnia dubia (water flea), 7 d, number of offspring, 0.74 mg/l
NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 2 mg/l

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 28 d, mortality, 150 - 280 mg/kg

Persistence and degradability

Information for the Product:

Product test data not available.

Information for components:

Toluene
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Not applicable
Biodegradation: 100 %
Exposure time: 14 d
Method: OECD Test Guideline 301C or Equivalent

Theoretical Oxygen Demand: 3.13 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 2 d
Method: Estimated.

Bioaccumulative potential

Information for the Product:

Product test data not available.

Information for components:

Toluene
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.73 Measured
Bioconcentration factor (BCF): 90 Carp (Leuciscus idus melanotus) Measured

Mobility in soil

Information for the Product:

Product test data not available.

Information for components:

Toluene
Partition coefficient (Koc): 205 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION 1: Identified Uses. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling &

Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility of the waste generator. Do not re-use containers for any purpose.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Toluene solution
UN number	UN 1294
Class	3
Packing group	II
Reportable Quantity	Toluene

Classification for SEA transport (IMO-IMDG):

Proper shipping name	TOLUENE SOLUTION
UN number	UN 1294
Class	3
Packing group	II
Marine pollutant	No
Special precautions for user	EmS: F-E, S-D
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Toluene solution
UN number	UN 1294
Class	3
Packing group	II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Flammable (gases, aerosols, liquids, or solids)
Hazard not otherwise classified (physical hazards)
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard
Skin corrosion or irritation

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	CASRN
Toluene	108-88-3

Pennsylvania Right To Know
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Toluene	108-88-3
Silanetriol, 1-propyl-, homopolymer	36088-62-7

California Prop. 65
WARNING: This product can expose you to chemicals including Benzene, Ethylbenzene, Cumene, which is/are known to the State of California to cause cancer, and Toluene, Benzene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

United States TSCA Inventory (US TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
NFPA

Health	Flammability	Instability
2	3	0

HMIS

Health	Flammability	Physical Hazard
3*	3	0

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 4021472 / A713 / Issue Date: 10/16/2026 / Version: 12.0

In case this version of the SDS contains significant changes from the previous version, they are listed below or noted by bold, double bars in the left-hand margin throughout this document.
Changes encompass identification, hazards, tox/eco-tox information and the addition/removal of the ingredients, and regulatory information, hazard information, uses, risk management measures and other key regulatory changes of the product. Detailed explanation of the changes can be obtained upon request.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
CEIL	Acceptable ceiling concentration
OSHA Z-2	USA. Occupational Exposure Limits (OSHA) - Table Z-2
Peak	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
TWA	8-hour, time-weighted average

Full text of other abbreviations
AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rateresponse; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC -International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitoryconcentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG -International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan);ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW SILICONES CORPORATION urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate,to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.
US

SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: DOWSIL™ Allguard Silicone Elastomeric Coating Pastel Tint Base

Issue Date: 01/06/2022

Print Date: 01/07/2022

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOWSIL™ Allguard Silicone Elastomeric Coating Pastel Tint Base

Recommended use of the chemical and restrictions on use
Identified uses: Impregnation agents Coatings

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2211 H.H. DOW WAY
MIDLAND MI 48674
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: CHEMTREC +1 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Eye irritation - Category 2A
Reproductive toxicity - Category 2

Label elements
Hazard pictograms



® ™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

Signal word: **WARNING!**

Hazards
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing, eye protection and/or face protection.

Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.

Storage
Store locked up.

Disposal
Dispose of contents and/or container to an approved waste disposal plant.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone elastomer
This product is a mixture.

Component	CASRN	Concentration
Limestone	1317-65-3	>= 8.0 - <= 11.0 %
Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-	60828-78-6	>= 1.1 - <= 1.8 %
Octamethyl Cyclotetrasiloxane	556-67-2	>= 0.032 - <= 0.16 %

4. FIRST AID MEASURES

Description of first aid measures
General advice:
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing; consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:
Causes serious eye irritation. Suspected of damaging fertility or the unborn child.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Water spray.

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: Silicon oxides. Nitrogen oxides (NOx). Formaldehyde. Carbon oxides.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health..

Advice for firefighters

Fire Fighting Procedures: Use water spray to cool unopened containers.. Evacuate area.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage..
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Do not release the product to the aquatic environment above defined regulatory levels Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not get on skin or clothing. Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.
Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store locked up. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers**:** None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Limestone	OSHA Z-1	TWA total dust	15 mg/m3
	OSHA Z-1	TWA respirable fraction	5 mg/m3
Octamethyl Cyclotetrasiloxane	US WEEL	TWA	10 ppm

Exposure controls
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	viscous liquid
Color	white
Odor	slight
Odor Threshold	No data available
pH	No data available
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	> 35 °C (> 95 °F)
Flash point	**closed cup** >100 °C (212 °F)
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not applicable
Flammability (liquids)	Ignitable (see flash point)

Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.18
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	37,500 mPa.s
Kinematic Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	Not applicable

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents.

Conditions to avoid: None known.

Incompatible materials: Avoid contact with oxidizing materials.

Hazardous decomposition products:
Decomposition products can include and are not limited to: Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Information on likely routes of exposure
Inhalation, Eye contact, Skin contact, Ingestion.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute Toxicity Endpoints:
Not classified based on available information.

Acute oral toxicity

Information for the Product:

Very low toxicity if swallowed. Swallowing may result in gastrointestinal irritation.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, > 5,000 mg/kg Estimated.

Information for components:

Limestone
LD50, Rat, > 2,000 mg/kg

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
LD50, Rat, 3,300 mg/kg

Octamethyl Cyclotetrasiloxane
LD50, Rat, male, > 4,800 mg/kg No deaths occurred at this concentration.

Acute dermal toxicity

Information for the Product:

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):
LD50, > 2,000 mg/kg Estimated.

Information for components:

Limestone
The dermal LD50 has not been determined.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
LD50, Rabbit, 8,874 mg/kg

Octamethyl Cyclotetrasiloxane
LD50, Rat, male and female, > 2,400 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity

Information for the Product:

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

Information for components:

Limestone
The LC50 has not been determined.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
The LC50 has not been determined.

Octamethyl Cyclotetrasiloxane
LC50, Rat, male and female, 4 Hour, dust/mist, 36 mg/l OECD Test Guideline 403

Skin corrosion/irritation

Not classified based on available information.

Information for the Product:

Based on information for component(s):
Brief contact is essentially nonirritating to skin.
Prolonged contact may cause slight skin irritation with local redness.
May cause more severe response on covered skin (under clothing, gloves).
May cause drying and flaking of the skin.

Information for components:

Limestone
May cause skin irritation due to mechanical abrasion.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
Prolonged contact may cause severe skin irritation with local redness and discomfort.
May cause more severe response on covered skin (under clothing, gloves).

Octamethyl Cyclotetrasiloxane
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Information for the Product:

Based on information for component(s):
May cause eye irritation.
May cause corneal injury.

Information for components:

Limestone

Solid or dust may cause irritation or corneal injury due to mechanical action.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Octamethyl Cyclotetrasiloxane
Essentially nonirritating to eyes.

Sensitization

For skin sensitization:
Not classified based on available information.

For respiratory sensitization:
Not classified based on available information.

Information for the Product:

For skin sensitization:
Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:
No relevant data found.

Information for components:

Limestone
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Octamethyl Cyclotetrasiloxane
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Limestone
Available data are inadequate to determine single exposure specific target organ toxicity.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Octamethyl Cyclotetrasiloxane
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Aspiration Hazard

Not classified based on available information.

Information for the Product:

Based on physical properties, not likely to be an aspiration hazard.

Information for components:

Limestone
Based on physical properties, not likely to be an aspiration hazard.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
Based on physical properties, not likely to be an aspiration hazard.

Octamethyl Cyclotetrasiloxane
May be harmful if swallowed and enters airways.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Limestone
No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Octamethyl Cyclotetrasiloxane
In animals, effects have been reported on the following organs:
Kidney.
Liver.
Respiratory tract.
Female reproductive organs.

Carcinogenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Limestone
No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
No relevant data found.

Octamethyl Cyclotetrasiloxane
Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

Teratogenicity

Suspected of damaging fertility or the unborn child.

Information for the Product:

Product test data not available.

Information for components:

Limestone
No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-

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No relevant data found.

Octamethyl Cyclotetrasiloxane
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Information for the Product:

Product test data not available.

Information for components:

Limestone
No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
No relevant data found.

Octamethyl Cyclotetrasiloxane
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. In animal studies, has been shown to interfere with fertility.

Mutagenicity

Not classified based on available information.

Information for the Product:

Product test data not available.

Information for components:

Limestone
No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-
No relevant data found.

Octamethyl Cyclotetrasiloxane
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Limestone

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 10,000 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, > 1,000 mg/l

Acute toxicity to algae/aquatic plants
EC50, Desmodesmus subspicatus (green algae), 72 Hour, > 200 mg/l

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), 96 Hour, 39 mg/l

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, 81.2 mg/l

Toxicity to bacteria
EC50, Bacteria, > 1,000 mg/l

Octamethyl Cyclotetrasiloxane

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.
No toxicity at the limit of solubility
LC50, Oncorhynchus mykiss (rainbow trout), flow-through, 96 Hour, > 0.022 mg/l
No toxicity at the limit of solubility
LC50, Cyprinodon variegatus (sheepshead minnow), flow-through, 14 d, > 0.0063 mg/l

Acute toxicity to aquatic invertebrates
No toxicity at the limit of solubility
EC50, Mysidopsis bahia (opossum shrimp), flow-through test, 96 Hour, > 0.0091 mg/l
No toxicity at the limit of solubility
EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 0.015 mg/l

Acute toxicity to algae/aquatic plants
No toxicity at the limit of solubility
ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, > 0.022 mg/l
No toxicity at the limit of solubility
EC10, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, >= 0.022 mg/l

Chronic toxicity to fish
No toxicity at the limit of solubility
NOEC, Oncorhynchus mykiss (rainbow trout), 93 d, growth, >= 0.0044 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, survival, 0.0079 mg/l

Persistence and degradability

Limestone

Biodegradability: No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
10-day Window: Fail
Biodegradation: < 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent

Theoretical Oxygen Demand: 2.35 mg/mg

Chemical Oxygen Demand: 1.90 mg/mg

Octamethyl Cyclotetrasiloxane

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Not applicable
Biodegradation: 3.7 %
Exposure time: 28 d
Method: OECD Test Guideline 310

Stability in Water (1/2-life)
Hydrolysis, DT50, 3.9 d, pH 7, Half-life Temperature 25 °C, OECD Test Guideline 111
Hydrolysis, DT50, 16.7 d, pH 7, Half-life Temperature 12 °C, OECD Test Guideline 111
Hydrolysis, DT50, 0.075 d, pH 4, Half-life Temperature 25 °C, OECD Test Guideline 111

Photodegradation
Atmospheric half-life: 16 d
Method: Estimated.

Bioaccumulative potential

Limestone

Bioaccumulation: No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility. May foam in water.

Octamethyl Cyclotetrasiloxane

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 6.49 Measured
Bioconcentration factor (BCF): 12,400 Pimephales promelas (fathead minnow) Measured

Mobility in soil

Limestone

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No relevant data found.

Poly(oxy-1,2-ethanediyl), .alpha.-[3,5-dimethyl-1-(2-methylpropyl)hexyl]-.omega.-hydroxy-

No specific, relevant data available for assessment.

Octamethyl Cyclotetrasiloxane

Partition coefficient (Koc): 16596 OECD Test Guideline 106

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section10 Regulatory Information, MSDS Section 15

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional

transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Reproductive toxicity
Serious eye damage or eye irritation

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

TSCA Other
A component of this product is subject to a TSCA Polymer Exemption (40 CFR 723.250).

Pennsylvania Right To Know
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	**CASRN**
Water	7732-18-5
Dimethyl, methyl ((diethylamino)oxy) siloxane reaction with dimethyl siloxane, hydroxy-terminated	189896-41-1
Limestone	1317-65-3
Titanium dioxide	13463-67-7
Silicon dioxide	7631-86-9

California Prop. 65
WARNING: This product can expose you to chemicals including Titanium dioxide, Silicon dioxide, Quartz, Formaldehyde, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
NFPA

Health	Flammability	Instability

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2	1	0

HMIS

Health	Flammability	Physical Hazard
2*	1	0

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 4127414 / A001 / Issue Date: 01/06/2022 / Version: 7.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TWA	8-hour time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US

SAFETY DATA SHEET

HEAVY DUTY DEGREASER

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	HEAVY DUTY DEGREASER
Other means of identification	:	Not applicable
Recommended use	:	Degreaser
Restrictions on use	:	Reserved for industrial and professional use.
Product dilution information	:	50.0 %
Company	:	Ecolab Inc. 4050 Corporate Dr., #100 Grapevine, Texas USA 76051-2326 1-866-999-7484
Emergency health information	:	1-866-897-8061 (US/Canada), 952-852-4656 (outside US)
Issuing date	:	06/29/2021

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Product AS SOLD

Eye irritation : Category 2B

Product AT USE DILUTION

Eye irritation : Category 2B

GHS label elements

Product AS SOLD

Signal Word : Warning

Hazard Statements : Causes eye irritation.

Precautionary Statements : **Prevention:**
Wash skin thoroughly after handling.
Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Product AT USE DILUTION

Signal Word : Warning

Hazard Statements : Causes eye irritation.

Precautionary Statements : **Prevention:**
Wash skin thoroughly after handling.
Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

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Product AS SOLD
Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD
Pure substance/mixture : Mixture

Chemical name	CAS-No.	Concentration (%)
Sodium Carbonate	497-19-8	5 - 10
Tetrasodium EDTA	64-02-8	1 - 5
Sodium hydroxide	1310-73-2	0.1 - 1

Product AT USE DILUTION

Chemical name	CAS-No.	Concentration (%)
Sodium Carbonate	497-19-8	1 - 5
Tetrasodium EDTA	64-02-8	1 - 5

SECTION 4. FIRST AID MEASURES

Product AS SOLD

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Rinse with plenty of water.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

Protection of first-aiders : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Product AT USE DILUTION

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Rinse with plenty of water.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

SECTION 5. FIRE-FIGHTING MEASURES

Product AS SOLD

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Not flammable or combustible.

Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides
Special protective equipment for fire-fighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Product AS SOLD

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Product AT USE DILUTION

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Product AS SOLD

Advice on safe handling	:	Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).
Conditions for safe storage	:	Do not store near acids. Keep out of reach of children. Store in suitable labeled containers.
Storage temperature	:	0 °C to 50 °C

Product AT USE DILUTION

Advice on safe handling	:	Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).
Conditions for safe storage	:	Keep out of reach of children. Store in suitable labeled containers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product AS SOLD
Ingredients with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
sodium hydroxide	1310-73-2	Ceiling	2 mg/m3	ACGIH
		Ceiling	2 mg/m3	NIOSH REL
		TWA	2 mg/m3	OSHA Z1

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection : No special protective equipment required.

Skin protection : No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

Product AT USE DILUTION
Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection : No special protective equipment required.

Skin protection : No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

		Product AS SOLD	Product AT USE DILUTION
Appearance	:	liquid	liquid
Color	:	clear, purple	purple
Odor	:	citrus	citrus
pH	:	13.2, (100 %)	11.5
Flash point	:	Not applicable, Does not sustain combustion.	
Odor Threshold	:	No data available	
Melting point/freezing point	:	No data available	
Initial boiling point and boiling range	:	100 °C	

Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	1.0 - 1.2
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
VOC	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Product AS SOLD

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	Acids Strong acids
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Product AS SOLD

Eyes	:	Causes eye irritation.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.

Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Product AT USE DILUTION

Eyes	:	Causes eye irritation.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Product AS SOLD

Eye contact	:	Redness, Irritation
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Product AT USE DILUTION

Eye contact	:	Redness, Irritation
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product AS SOLD
Product

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	No data available
Respiratory or skin sensitization	:	No data available
Carcinogenicity	:	No data available
Reproductive effects	:	No data available
Germ cell mutagenicity	:	No data available
Teratogenicity	:	No data available
STOT-single exposure	:	No data available
STOT-repeated exposure	:	No data available
Aspiration toxicity	:	No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product AS SOLD
Environmental Effects : Harmful to aquatic life.

Product AT USE DILUTION
Environmental Effects : This product has no known ecotoxicological effects.

Product AS SOLD
Product

Toxicity to fish : No data available

Toxicity to daphnia and other aquatic invertebrates : No data available

Toxicity to algae : No data available

Components

Toxicity to fish : Sodium Carbonate
96 h LC50 Lepomis macrochirus (Bluegill sunfish): 300 mg/l

Tetrasodium EDTA
96 h LC50 Fish: 121 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Sodium Carbonate
48 h EC50 Ceriodaphnia (water flea): 213.5 mg/l

Tetrasodium EDTA
48 h EC50 Daphnia magna (Water flea): 140 mg/l

Sodium hydroxide
48 h EC50: 40 mg/l

Persistence and degradability

Product AT USE DILUTION
Poorly biodegradable

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Product AS SOLD
Disposal methods : Do not contaminate ponds, waterways or ditches with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-

use empty containers. Dispose of in accordance with local, state, and federal regulations.

RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste	:	D002 (Corrosive)

Product AT USE DILUTION

Disposal methods	:	Diluted product can be flushed to sanitary sewer.
Disposal considerations	:	Dispose of in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)
Not dangerous goods

Sea transport (IMDG/IMO)

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium hydroxide	1310-73-2	1000	157529

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Serious eye damage or eye irritation
SARA 302	:	This material does not contain any components with a section 302 EHS TPQ.
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

California Cleaning Product Right to Know Act of 2017 (SB 258)

This regulation applies to this product.

Chemical Name	CAS-No.	Function	List(s)
water	7732-18-5	Diluent	Not Applicable
Sodium Carbonate	497-19-8	Cleaning Agent	Not Applicable
Tetrasodium EDTA	64-02-8	Cleaning Agent	Not Applicable
Sodium hydroxide	1310-73-2	Cleaning Agent	20
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., hydroxides, inner salts	61789-40-0	Cleaning Agent	Not Applicable
Nonionic Surfactant	Withheld	Cleaning Agent	Not Applicable
Silicon oxide derivative	Withheld	Film Former	Not Applicable
Limonene	5989-27-5	Fragrance	FRA
Fragrance Ingredient(s)	Not Available	Fragrance	Not Applicable
Colorant	Withheld	Dye	Not Applicable
Diethyl Phthalate	84-66-2	Fragrance	19, 21, NFC
Colorant	Withheld	Dye	Not Applicable
Substituted aromatic	Withheld	Dye	Not Applicable

*refer to ecolab.com/sds for electronic links to designated lists

The ingredients of this product are reported in the following inventories:

United States TSCA Inventory :
All substances listed as active on the TSCA inventory

Canadian Domestic Substances List (DSL) :
All components of this product are on the Canadian DSL

Australia. Australian Industrial Chemicals Introduction Scheme (AICIS) :
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemical Substances :
not determined

Japan. ENCS - Existing and New Chemical Substances Inventory :
not determined

Korea. Korean Existing Chemicals Inventory (KECI) :
not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances in China (IECSC) :
On the inventory, or in compliance with the inventory

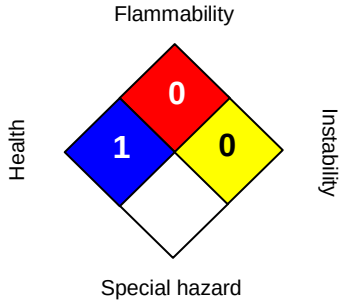
Taiwan Chemical Substance Inventory (TCSI) :
not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD

HEAVY DUTY DEGREASER

NFPA:



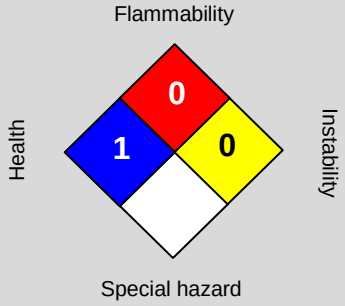
HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Product AT USE DILUTION

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Issuing date	:	06/29/2021
Version	:	1.3
Prepared by	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

INSTRUMENT LUBRICANT

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	INSTRUMENT LUBRICANT
Other means of identification	:	Not applicable
Recommended use	:	Lubricant
Restrictions on use	:	Reserved for industrial and professional use.
Product dilution information	:	0.098 % - 0.78 %
Company	:	Ecolab Inc. 1 Ecolab Place St. Paul, Minnesota USA 55102 1-800-352-5326
Emergency health information	:	1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)
Issuing date	:	03/11/2020

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Product AS SOLD

Aspiration hazard : Category 1

Product AT USE DILUTION

Not a hazardous substance or mixture.

GHS label elements

Product AS SOLD

Hazard pictograms :



Signal Word : Danger

Hazard Statements : May be fatal if swallowed and enters airways.

Precautionary Statements : **Response:**
IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Product AT USE DILUTION

Precautionary Statements : **Prevention:**
Wash hands thoroughly after handling.
Response:
Get medical advice/ attention if you feel unwell.
Storage:

FRS SDS Reference Library | S032 | Library page 306

Store in accordance with local regulations.

Product AS SOLD
Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD
Pure substance/mixture : Mixture

Chemical name	CAS-No.	Concentration (%)
white mineral oil, petroleum	8042-47-5	10 - 30

Product AT USE DILUTION

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

Product AS SOLD

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Rinse with plenty of water.

If swallowed : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed - can enter lungs and cause damage. Get medical attention immediately.

If inhaled : Get medical attention if symptoms occur.

Protection of first-aiders : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Product AT USE DILUTION

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Rinse with plenty of water.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

SECTION 5. FIRE-FIGHTING MEASURES

Product AS SOLD

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during fire : Not flammable or combustible.

fighting

Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus
Special protective equipment for fire-fighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Product AS SOLD

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Product AT USE DILUTION

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	No special environmental precautions required.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Product AS SOLD

Advice on safe handling	:	Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).
Conditions for safe storage	:	Keep out of reach of children. Store in suitable labeled containers.
Storage temperature	:	0 °C to 30 °C

Product AT USE DILUTION

Advice on safe handling	:	Wash hands after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective

Equipment (PPE). For personal protection see section 8.

Conditions for safe storage : Keep out of reach of children. Store in suitable labeled containers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product AS SOLD
Ingredients with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
white mineral oil, petroleum	8042-47-5	TWA (Mist)	5 mg/m3	NIOSH REL
		STEL (Mist)	10 mg/m3	NIOSH REL
		TWA (Mist)	5 mg/m3	OSHA Z1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection : No special protective equipment required.

Skin protection : No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

Product AT USE DILUTION
Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection : No special protective equipment required.

Skin protection : No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

		Product AS SOLD	Product AT USE DILUTION
Appearance	:	liquid	liquid
Color	:	opaque, white	white
Odor	:	odorless	odorless
pH	:	8.0, (100 %)	8.0

Flash point	:	Not applicable
Odor Threshold	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	0.98
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Molecular weight	:	No data available
VOC	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Product AS SOLD

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Product AS SOLD

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	May be fatal if swallowed and enters airways.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Product AT USE DILUTION

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Product AS SOLD

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	Vomiting
Inhalation	:	No symptoms known or expected.

Product AT USE DILUTION

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product AS SOLD
Product

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	No data available
Skin corrosion/irritation	:	No data available

Serious eye damage/eye irritation	:	No data available
Respiratory or skin sensitization	:	No data available
Carcinogenicity	:	No data available
Reproductive effects	:	No data available
Germ cell mutagenicity	:	No data available
Teratogenicity	:	No data available
STOT-single exposure	:	No data available
STOT-repeated exposure	:	No data available
Aspiration toxicity	:	No data available

SECTION 12. ECOLOGICAL INFORMATION

Product AS SOLD
Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	No data available
Toxicity to daphnia and other aquatic invertebrates	:	No data available
Toxicity to algae	:	No data available

Components

Toxicity to fish	:	white mineral oil, petroleum 96 h LC50 Oncorhynchus mykiss (rainbow trout): > 100 mg/l

Persistence and degradability

Product AS SOLD
No data available

Product AT USE DILUTION
No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Product AS SOLD

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

Product AT USE DILUTION

Disposal methods	:	Diluted product can be flushed to sanitary sewer.
Disposal considerations	:	Dispose of in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)
Not dangerous goods

Sea transport (IMDG/IMO)

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Aspiration hazard
SARA 302	:	This material does not contain any components with a section 302 EHS TPQ.
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

California Cleaning Product Right to Know Act of 2017 (SB 258)
This regulation does not apply to this product.

The ingredients of this product are reported in the following inventories:

United States TSCA Inventory :

INSTRUMENT LUBRICANT

All substances listed as active on the TSCA inventory

Canadian Domestic Substances List (DSL) :
All components of this product are on the Canadian DSL

Australia Inventory of Chemical Substances (AICS) :
not determined

New Zealand. Inventory of Chemical Substances :
not determined

Japan. ENCS - Existing and New Chemical Substances Inventory :
not determined

Korea. Korean Existing Chemicals Inventory (KECI) :
not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
not determined

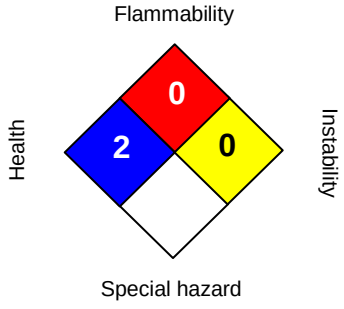
China. Inventory of Existing Chemical Substances in China (IECSC) :
not determined

Taiwan Chemical Substance Inventory (TCSI) :
not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

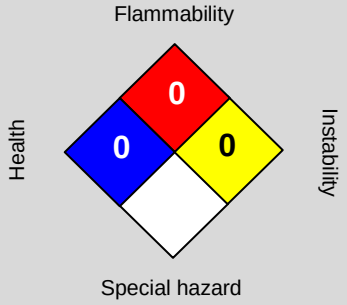
0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Product AT USE DILUTION

SAFETY DATA SHEET

INSTRUMENT LUBRICANT

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Issuing date	:	03/11/2020
Version	:	1.4
Prepared by	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Honeywell

SAFETY DATA SHEET

1. Identification

Product identifier **Eyesaline Eyewash or Sterile Eyesaline**

Other means of identification

Product code 32-ST1050, 32-ST2050, 32-000440, 32-000445, 32-000451, 32-000452, 32-000454, 32-000455, 32-000456, 32-000457, 32-000460, 32-000461, 32-000462, 32-000465, 32-000494, 32-000497, 32-000498

Recommended use Emergency eyewash.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name: Honeywell Safety Products USA, Inc

Address: 825 East Highway 151
Platteville, WI 53818 USA

Telephone: 1-800-873-5242

Contact Person hsptechsupport@honeywell.com

E-mail: msds@chemtrec.com

Emergency phone number: +1-703-741-5500 for USA/Canada

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

None.

3. Composition/information on ingredients

Mixtures

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Skin contact Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact Remove contact lenses. Get medical attention promptly if symptoms occur after flushing.

Ingestion Seek medical advice.

Most important symptoms/effects, acute and delayed No specific symptoms noted.

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Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire-fighting measures

Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	No restrictions known.
Specific hazards arising from the chemical	None.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	None.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	For industrial use, wear appropriate personal protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Stop leak if you can do so safely. Absorb spill with appropriate sand, clay or other inert sorbent material, then place in appropriate waste container. Large Spills: Flush area with water. Treat runoff per applicable environmental regulations pertaining to drains, water courses and ground water, diking if required.
Environmental precautions	Treat discharge into drains, water courses or onto the ground according to applicable regulations.

7. Handling and storage

Precautions for safe handling	Observe good industrial hygiene practices. Avoid inhalation of vapors and contact with skin and eyes.
Conditions for safe storage, including any incompatibilities	Keep container closed. Store away from incompatible materials. Do not allow material to freeze. Keep at temperature not exceeding 43°C / 110°F.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	No exposure standards allocated.
Appropriate engineering controls	Not required.

Individual protection measures, such as personal protective equipment

Eye/face protection	None under normal conditions.
Skin protection	
Hand protection	Chemical resistant gloves are recommended.
Other	None under normal working conditions.
Respiratory protection	Not normally needed.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

9. Physical and chemical properties

Appearance	Colorless liquid.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	No discernable odor.
Odor threshold	Not available.

pH	6.9 - 7.4
Melting point/freezing point	Not available.
Initial boiling point and boiling range	200 °F (93.33 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	760 mm Hg
Vapor density	Not available.
Relative density	1
Solubility(ies)	
Solubility (water)	Completely soluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	Stable at normal conditions.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Freezing. Elevated temperatures.
Incompatible materials	None.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Prolonged or repeated contact may dry skin and cause irritation.
Eye contact	May cause temporary eye irritation.
Ingestion	No harmful effects expected in amounts likely to be ingested by accident.
Symptoms related to the physical, chemical and toxicological characteristics	May cause discomfort if swallowed.

Information on toxicological effects

Acute toxicity	No adverse effects due to eye or skin contact are expected.
Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not a skin sensitizer.
Germ cell mutagenicity	Not classified.

Carcinogenicity Not classified.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

Chronic effects Not classified.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data available.

Bioaccumulative potential The product is not expected to bioaccumulate.

Mobility in soil The product is completely soluble in water.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. Do not allow runoff to sewer, waterway or ground.

Hazardous waste code Waste codes should be assigned by the user based on the application for which the product was used.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is not hazardous according to OSHA 29CFR 1910.1200.
One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

Not Listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

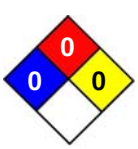
Issue date 02-July-2015

Revision date -

Version # 01

Further information The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

NFPA ratings



List of abbreviations

References	ACGIH EPA: Acquire database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents National Toxicology Program (NTP) Report on Carcinogens ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices ESIS (European chemical Substances Information System) HSDB® - Hazardous Substances Data Bank IARC Monographs. Overall Evaluation of Carcinogenicity
Disclaimer	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Final Charge Global 50/50 Prediluted Antifreeze and Coolant

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 11/01/2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : Final Charge Global 50/50 Prediluted Antifreeze and Coolant

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Heavy Duty Engine Coolant

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
3100 Sanders Road
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : 800 424 9300 (United States); 00 1 703 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07 GHS08

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : Harmful if swallowed.
Suspected of damaging fertility or the unborn child.
May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Precautionary statements (GHS-US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, spray, vapors
Wash affected areas thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear personal protective equipment as required.
If swallowed: Immediately call a doctor, a POISON CENTER
If swallowed: rinse mouth. Do NOT induce vomiting
If inhaled: Remove person to fresh air and keep comfortable for breathing
If exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% by wt	GHS-US classification
ethylene glycol	(CAS-No.) 107-21-1	<= 50	Acute Tox. 4 (Oral), H302
water	(CAS-No.) 7732-18-5	< 50	Not classified
diethylene glycol	(CAS-No.) 111-46-6	< 3	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
potassium p-tert-butylbenzoate	(CAS-No.) 16518-26-6	< 2	Repr. 2, H361
denatonium benzoate	(CAS-No.) 3734-33-6	0.003 - 0.005 [30 - 50 ppm]	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash skin with plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Rinse immediately with plenty of water (for at least 15 minutes), Get medical advice/attention.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : Obtain emergency medical attention. Rinse mouth. If the person is fully conscious, make him/her drink two glasses of water. Never give an unconscious person anything to drink. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes damage to organs (kidneys) Oral. Suspected of damaging fertility or the unborn child.

Symptoms/effects after skin contact : May cause moderate irritation.

Symptoms/effects after eye contact : Direct contact with the eyes is likely to be irritating.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz).

4.3. Indication of any immediate medical attention and special treatment needed

A more effective intravenous antidote for physician uses is 4-methylpyrazaole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occured.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water fog. Fine water spray. Foam. Carbon dioxide. Dry chemical powder. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream. May spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Product is not flammable or combustible but may burn under fire conditions.

Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Refer to section 8.2.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Store away from other materials.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources. Direct sunlight. Keep container closed when not in use. Product may become solid at temperatures below -37 ºC (-34 ºF). Do not store near food, foodstuffs, drugs or potable water supplies. Do not cut, drill, weld, use a blowtorch on, etc. containers even when empty.

Incompatible products : Keep away from strong acids, strong bases and oxidizing agents.

Incompatible materials : Sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

denatonium benzoate (3734-33-6)
Not applicable

ethylene glycol (107-21-1)		
ACGIH	Local name	Ethylene glycol
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
ACGIH	ACGIH TWA (ppm)	25 ppm (Vapor fraction)
ACGIH	ACGIH STEL (mg/m³)	10 mg/m³ (Inhalable fraction, Aerosol only)
ACGIH	ACGIH STEL (ppm)	50 ppm (Vapor fraction)
ACGIH	Remark (ACGIH)	Upper respiratory tract & eye irritant
ACGIH	Regulatory reference	ACGIH 2018

diethylene glycol (111-46-6)
Not applicable

water (7732-18-5)
Not applicable

potassium p-tert-butylbenzoate (16518-26-6)
Not applicable

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Safety glasses.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Respiratory protection not required in normal conditions. If exposed to levels above exposure limits wear appropriate respiratory protection.



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Molecular mass	:	62.07 g/mol Ethylene Glycol
Color	:	Red
Odor	:	Mild
Odor threshold	:	No data available
pH	:	8.6
Relative evaporation rate (butylacetate=1)	:	Nil
Freezing point	:	-37 °C (-34 ºF)
Boiling point	:	107 °C (224 ºF)
Flash point	:	116 °C (241 ºF) [100% Ethylene Glycol] *ASTM D56*
Auto-ignition temperature	:	400 °C (752 ºF) [100% Ethylene Glycol] *Literature*
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	< 0.1 mm Hg @ 20 ºC
Relative vapor density at 20 °C	:	No data available
Specific Gravity	:	1.07
Density	:	1.07 kg/l (8.91 lbs/gal)
Solubility	:	Water: Complete
Log Pow	:	No data available

Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	Not applicable
Explosive properties	:	Not applicable.
Oxidizing properties	:	Not applicable.

9.2. Other information

VOC content : 0

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Extremely high or low temperatures. Keep away from any flames or sparking source.

10.5. Incompatible materials

Keep away from strong acids, strong bases and oxidizing agents.

10.6. Hazardous decomposition products

Alcohols. Aldehydes. Carbon dioxide. Carbon monoxide. Ethers. Fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Final Charge Global 50/50 Prediluted Antifreeze and Coolant	
ATE US (oral)	500 mg/kg bodyweight

denatonium benzoate (3734-33-6)	
LD50 oral rat	584 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Literature study, Dermal)
ATE US (oral)	584 mg/kg bodyweight

ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight (according to BASF-internal standards, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s))
LC50 inhalation rat (mg/l)	> 2.5 mg/l (6 h, Rat, Male / female, Experimental value, Inhalation (aerosol))
ATE US (oral)	500 mg/kg bodyweight

diethylene glycol (111-46-6)	
LD50 oral rat	19600 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value, Oral)
LD50 dermal rabbit	11890 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 4.6 mg/l/4h (Other, 4 h, Rat, Weight of evidence)
ATE US (oral)	500 mg/kg bodyweight
ATE US (dermal)	11890 mg/kg bodyweight

Skin corrosion/irritation : Not classified
pH: 8.6

Serious eye damage/irritation : Not classified
pH: 8.6

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity	:	Suspected of damaging fertility or the unborn child.
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.
Symptoms/effects	:	Causes damage to organs (kidneys) Oral. Suspected of damaging fertility or the unborn child.
Symptoms/effects after skin contact	:	May cause moderate irritation.
Symptoms/effects after eye contact	:	Direct contact with the eyes is likely to be irritating.
Symptoms/effects after ingestion	:	Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz).

SECTION 12: Ecological information

12.1. Toxicity

denatonium benzoate (3734-33-6)	
LC50 fish 1	> 1,000.00 mg/l (96 h, Salmo gairdneri, Literature study)
EC50 Daphnia 1	13.00 mg/l (48 h, Daphnia magna, Literature study)

ethylene glycol (107-21-1)	
LC50 fish 1	40,761.00 mg/l (96 h, Salmo gairdneri, Static system)
EC50 Daphnia 1	> 10,000.00 mg/l (24 h, Daphnia magna)

diethylene glycol (111-46-6)	
LC50 fish 1	> 5,000.00 ppm (24 h, Carassius auratus)
EC50 Daphnia 1	> 10,000.00 mg/l (24 h, Daphnia magna)
LC50 fish 2	75,200.00 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Experimental value)
EC50 Daphnia 2	> 10,000.00 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability

denatonium benzoate (3734-33-6)	
Persistence and degradability	Biodegradability in water: no data available. No (test) data on mobility of the substance available.

ethylene glycol (107-21-1)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.47 g O_2/g substance
Chemical oxygen demand (COD)	1.24 g O_2/g substance
ThOD	1.29 g O_2/g substance
BOD (% of ThOD)	0.36

diethylene glycol (111-46-6)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 g O_2/g substance
Chemical oxygen demand (COD)	1.51 g O_2/g substance
ThOD	1.51 g O_2/g substance
BOD (% of ThOD)	0.02

12.3. Bioaccumulative potential

denatonium benzoate (3734-33-6)	
Log Pow	1.78 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

ethylene glycol (107-21-1)	
BCF fish 1	10.00 (72 h, Leuciscus idus)
BCF other aquatic organisms 1	0.21 - 0.6 (Procambarus sp., Chronic)
BCF other aquatic organisms 2	190.00 (24 h, Algae)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

diethylene glycol (111-46-6)	
BCF fish 1	100.00 (Other, 3 day(s), Leuciscus melanotus, Static system, Fresh water, Experimental value)
Log Pow	-1.98 (Calculated, Other)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

denatonium benzoate (3734-33-6)	
Ecology - soil	No (test)data on mobility of the substance available.

ethylene glycol (107-21-1)	
Surface tension	48.00 mN/m (20 °C)
Ecology - soil	No (test)data on mobility of the substance available.

diethylene glycol (111-46-6)	
Surface tension	0.05 N/m
Log Koc	0.00 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Effect on the ozone layer : No known effect on the ozone layer

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Non Bulk (in quantities under 5,000 lbs in any one inner package):
Not regulated by the US DOT

Bulk (in quantities 5,000 lbs or over in any one inner package):

Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s. (Ethylene Glycol), 9, III

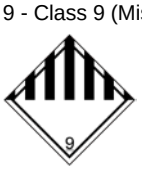
UN-No.(DOT) : UN3082

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s.
Ethylene Glycol

Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Symbols	:	G - Identifies PSN requiring a technical name
DOT Packaging Exceptions (49 CFR 173.xxx)	:	155
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	No limit
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

Transport by sea

In accordance with IMDG / IMO

Proper Shipping Name (IMDG) : Not regulated by IMDG (in quantites under 5,000 lbs in any one inner package)

Air transport

In accordance with IATA / ICAO

Proper Shipping Name (IATA) : Not regulated by IATA (in quantites under 5,000 lbs in any one inner package)

SECTION 15: Regulatory information

15.1. US Federal regulations

Final Charge Global 50/50 Prediluted Antifreeze and Coolant	
EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed

denatonium benzoate (3734-33-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
CERCLA RQ	5000 lb(s)
SARA Section 311/312 Hazard Classes	Refer to Section 2 for the OSHA hazard classification Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting.
SARA Section 313 - Emission Reporting	Ethylene glycol is subject to Form R Reporting requirements.

diethylene glycol (111-46-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Final Charge Global 50/50 Prediluted Antifreeze and Coolant	
WHMIS Classification	This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS.

potassium p-tert-butylbenzoate (16518-26-6)
Listed on the Canadian NDSL (Non-Domestic Substances List)

15.3. US State regulations

WARNING: This product can expose you to ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

ethylene glycol (107-21-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		(ingested) 8,700 (oral) µg/day

ethylene glycol (107-21-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

diethylene glycol (111-46-6)
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

SECTION 16: Other information

Revision date : 11/01/2019

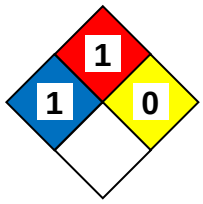
Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS GHS US (GHS HazCom 2012) OWI

Old World Industries, LLC makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, LLC as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, LLC assume liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

1.1: PRODUCT IDENTIFIER

Product Name: Flame-Retardant Heat-Shrink Tubing

1.2: INTENDED USE OF THE PRODUCT:

Heat-shrink tubing

1.3: NAME, ADDRESS, AND TELEPHONE OF THE RESPONSIBLE PARTY COMPANY

Manufacturer: ShenZhen Woer Heat-Shrinkable Material Co., Ltd.

Address: Woer Building, Xinwei Industry Park, Xili Town, Shenzhen City, China

Telephone: 86-755-28299167

Fax: 86-755-28299164

1.4: EMERGENCY TELEPHONE NUMBER

1 (800) 222-1222

SECTION 2: HAZARD(S) IDENTIFICATION

2.1: CLASSIFICATION OF THE SUSTABNCE OR MIXTURE

CLASSIFICATION (GHS-US)

Flammable

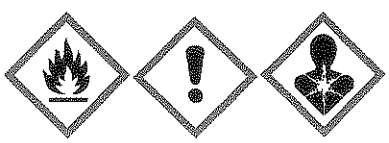
Eye Damage/Irritation

Lung Damage/Irriation

2.2: LABEL ELEMENTS

GHS-US LABELING

HAZARD PICTOGRAMS (GHS-US)



SIGNAL WORD

Danger

SYMBOLS

Flame

Exclamation Mark

Health Hazard

PRECAUTIONARY STATEMENTS (GHS-US)

Product will flare up for a moment and flameout; will produce a little smoke.

Causes damage to organs through prolonged or repeated exposure: respiratory system

Smoke causes eye irritation.

Harmful if inhaled.

PRECAUTIONARY STATEMENTS:

GENERAL:

Keep out of reach of children.

PREVENTION:

Do not breathe fumes/gas/vapors.

Do not eat, drink, or smoke when using this product.

Smoke can irritate lungs and eyes.

RESPONSE:

Get medical advice/attention if you feel unwell.

DISPOSAL:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Purpose	% By Weight	Manufacturer	C.A.S. No.
Polyolefin $(CH_2CH_2)n$	Main Material	50%	China Sinopec	9002-88-4

Magnesium Hydroxide $Mg(OH)_2$	Flame-Retardant Material	35%	Jinhaohui Material Co., Ltd.	1309-42-8
DBDPE $C_{14}H_4Br_{10}$	Flame-Retardant Material	10%	Shanghai Haiyi Co., Ltd.	84852-53-9
Color Material Grain	Pigment / Colorant Material	5%	Huawangcai Co., Ltd.	-
Printing Ink	Printing Ink	-	Shanghai Jiexin Co., Ltd.	-

SECTION 4: FIRST AID MEASURES

4.1: DESCRIPTION OF FIRST AID MEASURES

Inhalation:

Thermal degradation and combustion and combustion byproducts may be toxic and should not be inhaled. Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

This product is not expected to be a skin irritant. Contact with the molten material may cause thermal burns. No harmful effects are expected from skin absorption of this product.

Eye Contact:

Flush with large amounts of cool water. Remove contact lenses, if applicable and easy to do, and continue flushing. Obtain medical attention if irritation persists.

If Swallowed:

Ingestion of this product is highly unlikely. No need for first aid is anticipated.

4.2: MOST IMPORANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Thermal degradation and combustion and combustion byproducts may be toxic and should not be inhaled. Avoid inhalation. If inhaled, remove person to fresh air. If symptoms persist, get medical attention.

4.3: INDICATION OF ANY IMMEDICATE MEDICAL ATTENTION AND SPECIAL TREATMENT REQUIRED

Not applicable

SECTION 5: FIRE-FIGHTING MEASURES

5.1: SUITABLE EXTINGUISHING MEDIA

In case of fire: Use dust farina powder.

5.2: SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

None inherent in this product.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

Substance	Condition
Carbon Monoxide	During Combustion
Carbon Dioxide	During Combustion

5.3: SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1: PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Observe precautions from other sections.

6.2: ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment.

6.3: METHODS AND AMTERIAL FOR CONTAINMENT AND CLEANING UP;

Not applicable.

SECTION 7: HANDLING AND STORAGE

7.1: PRECAUTIONS FOR SAFE HANDLING

Using an oven or heat gun, the tube will shrink between 70-125°C. Avoid any vapors given off if the product is heated to decomposition, as shown by a darkening and browning of the sleeve. Avoid contact with molten material. Heat-resistant gloves are required if hot products are handled after installation. Do not consume food, beverage, or tobacco in the immediate work area. Wash hands before eating, drinking, or smoking. Avoid heating products beyond temperatures required for normal installation.

Installation: Follow the appropriate installation instructions and application guides to ensure that installation is performed properly. Ensure that any local requirements / legislation concerning the use of hand-held electrical equipment are observed. When using IR (infrared) heating devices, observe specific instructions. Do not touch hot surfaces on installation equipment.

7.2: CONDITIONS FOR SAFE STORAGE INCLUDING ANY INCOMPATIBILIITIES:

Protect from sunlight. Store away from heat.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1: CONTROL PARAMETERS

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2: EXPOSURE CONTROLS

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2.1: ENGINEERING CONTROLS

Provide general or local exhaust ventilation systems.

8.2.2: PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE / FACE PROTECTION

Use safety glasses with side shield or goggles to prevent contact with eyes, as appropriate to the given operation.

SKIN / HAND PROTECTION

Avoid contact with skin. Use heat resistant rated gloves to prevent skin contact. If it is necessary to handle grossly overheated or fire-damaged products, wear natural rubber gloves to prevent possible contact with potentially corrosive acid residues.

RESPIRATORY PROTECTION

If installation occurs in a confined, unventilated area, NIOSH/MSHA-approved respirators are recommended.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1: INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Physical State:	Solid
Appearance:	Plastic tubing; molded parts in a variety of shapes, sizes, and colors
Color:	Various
Odor:	Not determined
Odor Threshold:	Not determined
Tensile Strength:	>10.4 MPa

Elongation %:	>200%
Tensile Strength After Aging:	>7.3 MPa
Elongation % After Aging:	>100%
Dielectric Withstand at 300V:	No breakdown for 1500V
Dielectric Withstand at 600V:	No breakdown for 2500V
Volume Resistance:	>1X10^{14} Ωxcm
Anti-Corrosive:	PASS
Copper Stability:	PASS
Flammability:	VW-1

SECTION 10: STABILITY AND REACTIVITY

10.1: REACTIVITY

Not reactive under normal conditions.

10.2: CHEMICAL STABILITY

Stable under recommended storage conditions.

10.3: POSSIBILITY OF HAZARDOUS REACTIONS

None under normal processing.

10.4: CONDITIONS TO AVOID

Avoid overheating of product.

10.5: IMCOMPATIBLE MATERIALS

None known based on information supplied.

10.6: HAZARDOUS DECOMPOSITION PRODUCTS

See hazardous combustion products (Section 5).

Smoke produced may be hazardous. Avoid inhalation.

SECTION 11: TOXICOLOGICAL INFORMATION:

11.1: INFORMATION ON LIKELY ROUTES OF EXPOSURE:

Eye Contact:

Contact with molten materials may cause thermal burns. Smoke may irritate eyes.

Skin Contact:

This product is not expected to be a skin irritant. Contact with the molten material may cause thermal burns. No harmful effects are expected from skin absorption of this product.

Inhalation:

Thermal degradation and combustion and combustion byproducts may be toxic and should not be inhaled.

Ingestion:

Ingestion of this product is highly unlikely.

11.2: INFORMATION ON PHYSICAL, CHEMICAL, AND TOXICOLOGICAL EFFECTS:

Please see section four of this SDS for symptoms.

11.3: DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE:

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC, or NTP.

11.3: NUMERICAL MEAUSRES OF TOXICITY:

Not determined.

SECTION 12: ECOLOGICAL INFORMATION

12.1: TOXICITY:

Product does not break down in natural conditions; therefore it is not expected to be hazardous to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1: WASTE TREATMENT METHODS

Disposal of waste should be in accordance with applicable international, national, regional, and local laws and regulations.

Disposal of contaminated packaging should be in accordance with applicable international, national, regional, and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

14.1: In accordance with DOT

14.2: In accordance with IMDG

14.3: In accordance with IATA

SECTION 15: REGULATORY INFORMATION

15.1: U.S. Federal Regulations

California Prop. 65: This product does not contain any substances regulated under California Prop. 65.

15.2: US State Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OR PREPARATION OR LAST REVISION:

Date of Preparation: 11.12.15

Supercedes Date: 5.7.10

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFT 1910.1200.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

NATIONAL CHEMICAL LABORATORIES, INC.

World Class Cleaning Solutions®

SAFETY DATA SHEET

Section 1 - Identification

Product Identifier	FORTRESS Spray Disinfectant Deodorant
Other means of identification	2004
Recommended use	Spray Disinfectant Deodorant
Recommended restrictions	EPA Registered Product. For Commercial and Industrial Use Only. (RTU) Ready-To-Use aerosol.
Manufacturer / Importer / Supplier / Distributor Information	
Company Name	National Chemical Laboratories of PA, Inc.
Address	401 N. 10th Street - Philadelphia, PA 19123
Telephone	1 (215) 922-1200
Supplier Email	info@nclonline.com
Contact	CHEM-TEL
Emergency Phone	1 (800) 255-3924

Section 2 - Hazard(s) Identification

SDS Hazards and Warnings are based on the undiluted product. Refer to diluted SDS for Ready-To-Use Hazards and Warnings.

	Classification	Category
Physical Hazards	Flammable Aerosols	2
	Gasses under pressure	Liquefied gas
Health Hazards	Acute toxicity, oral	5
	Serious eye damage/eye irritation	2B
	Skin corrosion/irritation	3
	Specific target organ toxicity, single exposure	3

OSHA defined hazards Not Classified.

Label Elements

Hazard Symbol



Signal Word Warning

Hazard Statement Flammable aerosol. Contains gas under pressure; may explode if heated. May be harmful if swallowed. Causes eye irritation. Causes mild skin irritation. May be harmful if inhaled.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area. Wear eye/face protection.Wash thoroughly after handling. Keep out of reach of children.

Response IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Protect from sunlight. Do not expose to temperatures exceeding 122°F/50°C. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Section 3 - Composition/Information on ingredients

Mixture

Hazardous Components

Ingredient Name	CAS #	%
Liquified Petroleum Gas	68476-86-8	30 - 40
_Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride (Alternate CAS 68956-79-6)	85409-23-0	< 0.1
_Alkyl Dimethyl Benzyl Ammonium Chloride (C12-C18)	68391-01-5	< 0.1

Composition Comments Components not listed are either non-hazardous or are below reportable limits.

Section 4 - First-aid Measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.

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Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low to avoid getting into the lungs. Call a poison control center if large amounts are ingested. Never give anything by mouth to an unconscious person.
Most Important symptoms /effects, acute and delayed	Eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5 - Fire-fighting measures

Suitable extinguishing media	Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Contents under pressure. Containers may explode when heated.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment /instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific Methods	Use standard fire fighting procedures and consider the hazards of other involved materials.

Section 6 - Accidental release measures

Personal precautions, protective equipment and emergency procedures.	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

Section 7 - Handling and storage

Precautions for safe handling	HARMFUL IF INHALED OR SWALLOWED. VAPOR HARMFUL. CAUSES SEVERE EYE AND SKIN DAMAGE. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Do not eat, drink or smoke when using this product. Keep out of reach of children. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Contents under pressure. Do not expose to heat or store at temperatures above 122°F/50°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

Section 8 - Exposure control/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Liquified Petroleum Gas (CAS 68476-86-8)	TWA	1000 ppm	Mist

US. ACGIH Threshold Limit Values

Component	Type	Value	Form
Liquified Petroleum Gas (CAS 68476-86-8)	TLV	1000 ppm	Mist

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Use personal protective equipment as required. Keep working clothes separately.
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear eye/face protection.
Skin protection	
Hand protection	Wear suitable protective clothing.
Other	If conditions risk exposure, wear suitable protective clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9 - Physical and chemical properties

Appearance	
Physical state	Gas/Liquid mixture.
Form	Aerosol. Liquefied gas. Clear liquid.
Color	Pale Straw.
Odor	Floral (Puri™).
Odor threshold	Not available.
pH	11.0 - 12.0
Melting point/freezing point	Not available.
Initial boinging point and boiling range	Not available.
Flash point	-156.0 °F (-104.4 °C) Propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.00 ± 0.01 @ (75°F) (liquid)
Relative density temperature	75 °F (23.89 °C)
Solubilities	Soluble. (liquid)
Partition Coefficient n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	<10 cSt.
Viscosity Temperature	75 °F (23.89 °C)
Other Information	
VOC's	30 - 40 %
Pressure	40 - 52 psig @ 70F

Section 10 - Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possiblity of hazardous reactions	Hazardous polymerization does not occur.
Conditions to Avoid	Avoid heat, sparks, open flames and other ignition sources. Temperatures above 122°F/50°C. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide.

Section 11 - Toxicological information

Information on likely routes of exposure

Ingestion	May be harmful if swallowed.
Inhalation	May cause respiratory tract irritation. This product may be aspirated onto the lungs and cause chemical pneumonitis.
Skin contact	Causes skin irritation. Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Eye contact	Causes eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Eye irritation. Symptoms may include discomfort or pain,excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Information on toxicological effects.

Acute toxicity May be harmful if swallowed.

Components	Level	Type	Code	Species	Results
_Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride (Alternate CAS 68956-79-6) (CAS 85409-23-0)	Acute	Dermal	LD50	Rabbit	> 2000 mg/kg
	Acute	Inhalation	LC50		> 20 mg/l
_Alkyl Dimethyl Benzyl Ammonium Chloride (C12-C18) (CAS 68391-01-5)	Acute	Dermal	LD50	Rat	1420 mg/kg
	Acute	Oral	LD50	Rat	500 - 5000 mg/l
	Acute	Dermal	LD50	Rabbit	> 2000 mg/kg
	Acute	Inhalation	LC50		> 20 mg/l

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/ eye irritation Causes eye irritation.

Respiratory sensitization This product is not expected to cause respiratory sensitization.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not likely, due to the form of the product.

Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

Section 12 - Ecological Information

Ecotoxicity May cause long-term adverse effects in the aquatic environment.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13 - Disposal considerations

Disposal instructions Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
PESTICIDE DISPOSAL - Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental
Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

Section 14 - Transport information

DOT

UN number UN1950

Proper shipping name Aerosols, flammable

Transport hazard class(es) 2.1

Packing group Not Applicable.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Labels required None/Ninguno

Packaging exemption 306

Packaging non bulk None/Ninguno

Packaging bulk	None/Ninguno
Comment	This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Packaging group	Not Applicable.
Environmental hazards	No.
Labels required	2.1
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other Information	
Passenger and Cargo aircraft	Allowed.
Cargo aircraft only	Allowed.
Packaging Exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	2.1
Packaging group	Not Applicable.
Environmental hazards	No.
Marine pollutant	
Labels required	2.1
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY

Transportation in bulk according to Annex II of MARPOL 73/78 and IBC Code	Not applicable.

Section 15 - Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR707, Subpt. D)

Components	Result	Comment
Liquified Petroleum Gas (CAS 68476-86-8)	8-12%	

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

CERCLA Hazardous Substance List (40 CFR 302.4 Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard	Yes
	Delayed Hazard	No
	Fire Hazard	Yes
	Pressure Hazard	Yes
	Reactivity Hazard	No

SARA 302 Extremely hazardous substance Not regulated.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HSPs) List Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US.Massachusetts RTK - Substance List Not regulated.

US.New Jersey Worker and Community Right-to-Know Act Not listed.

US.Pennsylvania RTK - Hazardous Substances Not listed.

US.Rhode Island RTK Not regulated.

US - California Propsition 65 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This

material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notifed Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances	No
Unites States Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

***A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).**
***A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).**

Section 16 - Other information, including date of preparation or last version

Issue date 4/17/2015

Version # 01

Disclaimer The information contained herein was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond the manufacturer's control, it is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense arising from the product's improper use. No warranty, expressed or implied, regarding the product described herein shall be created by or inferred from any statement or omission in this SDS. Various government agencies may have specific regulations concerning the transportation, handling, storage, use or disposal of this product which may not be reflected in this SDS. The user should
review these regulations to ensure full compliance.

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Polar Power Diesel Fuel Treatment**

Product Code(s) : US Product Codes: 00106, 90106, 00108P, 00109
Canada Product Codes: 00222, 90222

Recommended use of the chemical and restrictions on use

: Diesel fuel treatment. No restrictions on use known.

Chemical family : Mixture.

Name, address, and telephone number of the manufacturer:

FPPF Chemical Company, Inc.
117 West Tupper Street
Buffalo, NY, USA
14201
Manufacturer's Telephone # : 1-800-735-3773

Name, address, and telephone number of the supplier:

Refer to manufacturer

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Colourless to slightly hazy liquid. Amber liquid. Solvent odour.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification:
Flammable Liquid - Category 3
Acute Toxicity, dermal - Category 3
Acute Toxicity, inhalation - Category 3 (vapor)
Skin Irritation - Category 2
Eye Damage/Irritation - Category 2A
Aspiration Toxicity - Category 1
Reproductive Toxicity - Category 2 Developmental
Carcinogenicity- Category 2
Specific Target Organ Toxicity, Single Exposure - Category 3 (cns)
Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory)

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

Flammable liquid and vapour
Toxic in contact with skin.
Toxic if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May be fatal if swallowed and enters airways.
Suspected of causing cancer.
Suspected of damaging the unborn child.

SAFETY DATA SHEET

Precautionary statement(s)

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical and ventilating equipment. Use non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors or mists. Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. Wash hands and face thoroughly after handling.

In case of fire, use water fog, dry chemical, CO2 or 'alcohol' foam.
IF exposed or concerned: Get medical attention/advice.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs, get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Do NOT induce vomiting.

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

No OSHA defined hazard classes.
Other hazards which do not result in classification: May be sensitive to static discharge. Burning produces obnoxious and toxic fumes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Prolonged or repeated contact may cause drying, cracking and defatting of the skin.
Environmental precautions: Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Common name and synonyms	CAS #	Concentration
Light aromatic solvent naphtha	Aromatic solvent naphtha Solvent Naphtha (Petroleum) Light Aromatic	64742-95-6	**55.0 - 65.0**
2-Butoxy ethanol	Ethylene Glycol Monobutyl Ether EGBE	111-76-2	**20.0 - 25.0**
1,2,4-Trimethylbenzene	Pseudocumene	95-63-6	**3.0 - 5.0**
1,3,5-Trimethyl benzene	Trimethylbenzol Mesitylene	108-67-8	**1.5 - 3.0**
Xylene (mixed isomers)	Dimethylbenzene Methyltoluene Xylol	1330-20-7	**1.0 - 2.0**
Cumeme	Isopropyl benzene Cumol 2-Phenyl propane	98-82-8	**0.5 - 1.5**
Trimethyl benzene	Trimethylbenzene (mixed isomers) Methylxylenes	25551-13-7	**1.0 - 2.0**
Ethylbenzene	Ethylbenzol Phenylethane	100-41-4	**0.1 - 0.9**

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Do NOT induce vomiting. Aspiration hazard Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.

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Inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only.

Skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs, get medical advice/attention.

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Most important symptoms and effects, both acute and delayed

: IF exposed or concerned: Get medical attention/advice.
Toxic in contact with skin. May be absorbed through the skin, producing symptoms similar to ingestion or inhalation.
Toxic if inhaled. Symptoms may include coughing, choking and wheezing. May cause respiratory impairment and lung damage.
May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties.
May cause drowsiness or dizziness. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.
Causes skin irritation. Symptoms may include redness, itching and swelling.
Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.
May be fatal if swallowed and enters airways. Aspiration hazard - material may cause lung inflammation or damage if it enters lungs through vomiting or swallowing. Symptoms include coughing, shortness of breath and wheezing.
Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
Suspected of damaging the unborn child. Symptoms in offspring may include reduced fetal weight, behavioral effects, delayed skeletal formation and hearing loss.

Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Chronic overexposure to 2-butoxyethanol may cause liver, kidney and blood damage, based on animal data. Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Provide general supportive measures and treat symptomatically. Show this safety data sheet to the doctor in attendance.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Dry chemical, foam, carbon dioxide and water fog.

Unsuitable extinguishing media

: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

: Flammable liquid and vapour Keep away from heat, sparks, and open flames. This product will accumulate static charge by flow, splashing or agitation.
After prolonged storage, may release explosive peroxides in the presence of air.
Vapors may travel considerable distance to a source of ignition and flash back.
Vapours may be heavier than air and may collect in confined and low-lying areas.
Product may float, and be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.106)

: Flammable Liquid - Category 3

Hazardous combustion products

: Carbon oxides. Polycyclic aromatic hydrocarbons. Reactive hydrocarbons. Aldehydes. Other irritating fumes and smoke.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

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: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Evacuate personnel to safe areas. Keep all other personnel upwind and away from the spill/release. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

: Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Do not use combustible absorbents, such as sawdust. Bond and ground transfer containers and equipment to avoid static accumulation. Pick up and transfer to properly labelled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities.

Special spill response procedures

: In case of a transportation accident, in the United States contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
US CERCLA Reportable quantity (RQ):
Xylene (100 lbs / 45.4 kg);
Cumene (5000 lbs / 2270 kg)
Ethylbenzene (1000 lbs / 454 kg) .

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical and ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Avoid breathing mist or vapours. Do not ingest. Do not eat, drink, smoke or use cosmetics while working with this product. Avoid contact with skin, eyes and clothing. Avoid contact with incompatible materials.

Conditions for safe storage : Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up. Store away from incompatibles and out of direct sunlight. After prolonged storage, may release explosive peroxides in the presence of air. Direct sunlight or heat may accelerate the release of peroxides. Rate of peroxide formation is not known. Take measures to prevent the build up of electrostatic charge. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Incompatible materials : Strong oxidizing agents; Acids; Perchloric acid.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Light aromatic solvent naphtha	N/Av	N/Av	N/Av	N/Av
2-Butoxy ethanol	20 ppm	N/Av	50 ppm (skin)	N/Av
1,2,4-Trimethylbenzene	25 ppm (trimethylbenzene isomers)	N/Av	25 ppm (trimethylbenzene isomers) (final rule limit)	N/Av
1,3,5-Trimethyl benzene	25 ppm (trimethylbenzene isomers)	N/Av	25 ppm (trimethylbenzene isomers) (final rule limit)	N/Av
Xylene (mixed isomers)	100 ppm	150 ppm	100 ppm (435 mg/m³)	N/Av
Cumeme	50 ppm	N/Av	50 ppm ; 245 mg/m³ (Skin)	N/Av
Trimethyl benzene	25 ppm	N/Av	25 ppm (final rule limit)	N/Av
Ethylbenzene	20 ppm	N/Av	100 ppm (435 mg/m³)	125ppm (545mg/m³)

Exposure controls

Ventilation and engineering measures
: Use only outdoors or in a well-ventilated area. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Use explosion-proof equipment. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection : If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable approved respiratory protection. If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection : Wear protective gloves/clothing. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye / face protection : Wear eye/face protection. Chemical splash goggles are recommended. A full face shield may also be necessary.

Other protective equipment : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations
: Avoid breathing mist or vapor. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not eat, drink, smoke or use cosmetics while working with this product. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear to slightly hazy amber liquid.
Odour : Solvent odor.
Odour threshold : N/Av
pH : N/Av
Melting/Freezing point : N/Av
Initial boiling point and boiling range
: >149°C / >300°F
Flash point : 46.7°C / 116°F
Flashpoint (Method) : Tag closed cup

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Evaporation rate (BuAe = 1)	:	Slower than n-butyl acetate
Flammability (solid, gas)	:	N/Ap
Lower flammable limit (% by vol.)	:	N/Av
Upper flammable limit (% by vol.)	:	N/Av
Oxidizing properties	:	None known.
Explosive properties	:	N/Av
Vapour pressure	:	<4mm Hg @ 20°C
Vapour density	:	<1
Relative density / Specific gravity	:	0.883
Solubility in water	:	Partially soluble.
Other solubility(ies)	:	N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution	:	N/Av
Auto-ignition temperature	:	N/Av
Decomposition temperature	:	N/Av
Viscosity	:	N/Av
Volatiles (% by weight)	:	90%(approximately)
Volatile organic Compounds (VOC's)	:	N/Av
Absolute pressure of container	:	N/Ap
Flame projection length	:	N/Ap
Other physical/chemical comments	:	None reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not normally reactive.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization will not occur. May be sensitive to static discharge. May form explosive peroxides during prolonged exposure to air and heat. Rate of peroxide formation is not known.
Conditions to avoid	:	Keep away from heat, sparks and flame. Keep away from direct sunlight. Ensure adequate ventilation, especially in confined areas. Take precautionary measures against static discharge. Avoid contact with incompatible materials.
Incompatible materials	:	Strong oxidizing agents; Acids; Perchloric acid.
Hazardous decomposition products	:	None reported by the manufacturer. Refer also to hazardous combustion products, Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation	:	YES
Routes of entry skin & eye	:	YES
Routes of entry Ingestion	:	YES
Routes of exposure skin absorption	:	YES

SAFETY DATA SHEET

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Toxic if inhaled. Inhalation may cause respiratory irritation and central nervous system depression. Symptoms include:Upper respiratory irritation, coughing, sneezing, staggering gait, giddiness, drowiness, slurred speech, nausea, and possible nervous system depression.

Sign and symptoms ingestion

: Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea. Causes symptoms similar to those listed for inhalation. May be fatal if swallowed and enters airways. Aspiration hazard - material may cause lung inflammation or damage if it enters lungs through vomiting or swallowing. Symptoms include coughing, shortness of breath and wheezing.

Sign and symptoms skin : Toxic in contact with skin. May be absorbed through the skin, producing symptoms similar to ingestion or inhalation.
Causes skin irritation. Symptoms include: Dryness, itching, cracking, burning, redness and swelling.

Sign and symptoms eyes : Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.

Potential Chronic Health Effects

: Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Chronic overexposure to 2-butoxyethanol may cause liver, kidney and blood damage. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

Mutagenicity : Not expected to be mutagenic in humans.

Carcinogenicity : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification Carcinogenicity- Category 2 Suspected of causing cancer.

Contains Cumene. Cumene is classified as possibly carcinogenic by IARC (Group 2B). Contains Ethylbenzene. Ethylbenzene is classifed as carcinogenic by IARC (Group 2B) and ACGIH (Category A3).

Reproductive effects & Teratogenicity

: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification Reproductive Toxicity - Category 2 Suspected of damaging the unborn child. Developmental

Contains Xylene (mixed isomers) Xylene may cause fetotoxic effects (e.g. reduced fetal weight, delayed ossification, behavioral effects) at doses which are not maternally toxic, based on animal data.

Sensitization to material : Not expected to be a skin sensitizer.
Not expected to be a respiratory sensitizer.

Specific target organ effects : Eyes, skin, respiratory system, digestive system, central nervous system, blood system.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Classification
Specific target organ toxicity - single exposure Category 3 May cause drowsiness and dizziness. May cause respiratory irritation.

Not classified as a specific target organ toxicity-repeated exposure.

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Medical conditions aggravated by overexposure
: Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials : None reported by the manufacturer.

Toxicological data : The calculated ATE values for this mixture are:
ATE oral = 2215.6mg/kg
ATE dermal = 959mg/kg
ATE inhalation (vapours) =6.0mg/L/4H

See below for individual ingredient acute toxicity data.

Chemical name	LC_{50}(4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Light aromatic solvent naphtha	>17.7mg/L/4H (vapour)	8400 mg/kg	>3160 mg/kg
2-Butoxy ethanol	450 ppm (2.175 mg/L)	530 mg/kg	400 - 500 mg/kg
1,2,4-Trimethylbenzene	18 mg/L	5000 mg/kg	> 3160 mg/kg
1,3,5-Trimethyl benzene	24 mg/L	23 000 mg/kg	>3160mg/kg
Xylene (mixed isomers)	6350 ppm (27.6 mg/L) (vapours)	3253 mg/kg	12 180 mg/kg
Cumeme	8000 ppm; 39 mg/L	2260 mg/kg	10 627 mg/kg
Trimethyl benzene	18 - 24 mg/L (vapour)	8970 mg/kg	> 3160 mg/kg
Ethylbenzene	4000 ppm (17.4 mg/L) (vapour)	3500 mg/kg	15 380 mg/kg

Other important toxicological hazards
: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : No data is available on the product itself.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Light aromatic solvent naphtha	64742-95-6	9.22 mg/L (Rainbow trout)	N/Av	None.
2-Butoxy ethanol	111-76-2	1490 mg/L (Lepomis marcrhius)	>100mg/L (Zebra fish)	None.
1,2,4-Trimethylbenzene	95-63-6	7.72 mg/L (Fathead minnow)	N/Av	None.
1,3,5-Trimethyl benzene	108-67-8	12.52 mg/L (Goldfish)	N/Av	None.
Xylene (mixed isomers)	1330-20-7	8.2 mg/L (Rainbow trout)	N/Av	None.
Cumeme	98-82-8	4.5mg/L (Rainbow trout)	0.38mg/L QSAR	None.
Trimethyl benzene	25551-13-7	7.72 mg/L (Fathead minnow) (Read-across);	N/Av	None.
Ethylbenzene	100-41-4	4.2 mg/L (Rainbow trout)	1.13 mg/L (30 days) QSAR	None.

SAFETY DATA SHEET

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Light aromatic solvent naphtha	64742-95-6	6.16 mg/L (Daphnia magna)	N/Av	None.
2-Butoxy ethanol	111-76-2	835mg/L (Daphnia magna)	100mg/L (Daphnia magna)	None.
1,2,4-Trimethylbenzene	95-63-6	3.6 mg/L (Daphnia magna)	N/Av	None.
1,3,5-Trimethyl benzene	108-67-8	6 mg/L (Daphnia magna)	0.4mg/L	None.
Xylene (mixed isomers)	1330-20-7	3.2 - 9.56 mg/L (Daphnia magna)	N/Av	None.
Cumeme	98-82-8	2.14 mg/L (Daphnia magna)	0.35mg/L	None.
Trimethyl benzene	25551-13-7	2.7 mg/L (Daphnia magna) (Read-across);	0.4 mg/L (Read-across);	None.
Ethylbenzene	100-41-4	1.81 mg/L (Daphnia magna)	N/Av	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Light aromatic solvent naphtha	64742-95-6	N/Av	N/Av	N/Av
2-Butoxy ethanol	111-76-2	911mg/L/72hr	286mg/L/72hr	None.
1,2,4-Trimethylbenzene	95-63-6	2.356mg/L/96hr QSAR	N/Av	None.
1,3,5-Trimethyl benzene	108-67-8	3.191mg/L QSAR	N/Av	None.
Xylene (mixed isomers)	1330-20-7	3.2 - 4.9 mg/L/72hr (Green algae)	N/Av	None.
Cumeme	98-82-8	1.29mg/L/72hr (Green algae)	0.73mg/L	None.
Trimethyl benzene	25551-13-7	5.7 mg/L/72hr (Green algae) (Read-across);	0.38 mg/L/72hr (Read-across);	None.
Ethylbenzene	100-41-4	3.6 mg/L/96hr (Green algae)	3.4 mg/L/96hr	None.

Persistence and degradability : No data is available on the product itself. The following ingredients are considered to be readily biodegradable: 2-butoxyethanol.

Bioaccumulation potential : No data is available on the product itself.

See the following data for ingredient information.

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Components	Partition coefficent n-octanol/ater (log Kow)	Bioconcentration factor (BCF)
Light aromatic solvent naphtha (CAS 64742-95-6)	2.1 - 6(calulated)	10 - 2500
2-Butoxy ethanol (CAS 111-76-2)	0.81 at 25 °C	0.97
1,2,4-Trimethylbenzene (CAS 95-63-6)	3.78	31 - 275
1,3,5-Trimethyl benzene (CAS 108-67-8)	3.6 - 3.93	23 - 328
Xylene (mixed isomers) (CAS 1330-20-7)	3.12 - 3.2	0.6 - 15
Cumeme (CAS 98-82-8)	3.55 at 23 °C	244
Trimethyl benzene (CAS 25551-13-7)	3.63	42 - 328
Ethylbenzene (CAS 100-41-4)	3.15	1.1 - 1.5

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: The ecological characteristics of this product have not been fully investigated. Contains material that may be harmful in the environment. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.

Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	UN1993	FLAMMABLE LIQUID, N.O.S. (Aromatic naphtha; Trimethylbenzene)	3	III	
49CFR/DOT Additional information	This material may be reclassed as a 'Combustible liquid', when shipping by ground within the United States only. Combustible liquids may be shipped as non-hazardous material when shipped in non-bulk containers (450 L / 119 Gallons or less). Refer to 49 CFR Section 173.150. This product meets the criteria for an environmentally hazardous material according to the IMDG Code.				
TDG	UN1993	FLAMMABLE LIQUID, N.O.S. (Aromatic naphtha; Trimethylbenzene)	3	III	
TDG Additional information	This material may be shipped as non-regulated material when in small means of containment (<450 Litres), provided the requirements of TDG section 1.33 are met. This product meets the criteria for an environmentally hazardous material according to the IMDG Code.				

Special precautions for user : Keep away from heat, sparks and open flame. - No smoking.

Environmental hazards : This product meets the criteria for an environmentally hazardous material according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not available.

SAFETY DATA SHEET

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Light aromatic solvent naphtha	64742-95-6	Yes	N/Ap	N/Ap	No	N/Ap
2-Butoxy ethanol	111-76-2	Yes	N/Ap	N/Av	No	N/Ap
1,2,4-Trimethylbenzene	95-63-6	Yes	N/Ap	N/Ap	Yes	1%
1,3,5-Trimethyl benzene	108-67-8	Yes	N/Ap	N/Av	No	N/Ap
Xylene (mixed isomers)	1330-20-7	Yes	100 lb/ 45.4 kg	None.	Yes	1%
Cumeme	98-82-8	Yes	5000 lb/ 2270 kg	N/Ap	Yes	1%
Trimethyl benzene	25551-13-7	Yes	N/Ap	N/Ap	No	N/Ap
Ethylbenzene	100-41-4	Yes	1000 lb/ 454 kg	N/Ap	Yes	0.1%

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Fire Hazard; Acute Health Hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Light aromatic solvent naphtha	64742-95-6	No	Not listed	No	No	No	No	No	No
2-Butoxy ethanol	111-76-2	No	Not listed	Yes	Yes	Yes	Yes	Yes	Yes
1,2,4-Trimethylbenzene	95-63-6	No	Not listed	No	Yes	Yes	Yes	Yes	No
1,3,5-Trimethyl benzene	108-67-8	No	Not listed	Yes	Yes	No	No	No	No
Xylene (mixed isomers)	1330-20-7	No	Not listed	Yes	Yes	Yes	Yes	Yes	Yes
Cumeme	98-82-8	Yes	Carcinogen	Yes	Yes	Yes	Yes	Yes	Yes
Trimethyl benzene	25551-13-7	No	Not listed	Yes	Yes	Yes	Yes	Yes	Yes
Ethylbenzene	100-41-4	Yes	Cancer	Yes	Yes	Yes	Yes	Yes	Yes

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS Classification: See Section 2.

International Information:

Components listed below are present on the following International Inventory list:

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Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Light aromatic solvent naphtha	64742-95-6	265-199-0	Present	Present	(9)-1698	KE-31662	Present	May be used as a single component chemical under an appropriate group standard
2-Butoxy ethanol	111-76-2	203-905-0	Present	Present	(7)-97; (2)-407	KE-04134	Present	HSR001154
1,2,4-Trimethylbenzene	95-63-6	202-436-9	Present	Present	(3)-7; (3)-3427	KE-34410	Present	HSR001382
1,3,5-Trimethyl benzene	108-67-8	203-604-4	Present	Present	(3)-7; (3)-3427	KE-34411	Present	HSR001229
Xylene (mixed isomers)	1330-20-7	215-535-7	Present	Present	(3)-60; (3)-3	KE-35427	Present	HSR000983
Cumeme	98-82-8	202-704-5	Present	Present	(3)-32; (3)-22	KE-23957	Present	HSR001184
Trimethyl benzene	25551-13-7	247-099-9	Present	Present	(3)-7; (3)-3427	KE-34408	Present	May be used as a component in a product covered by a group standard, but is not approved for use as a chemical in its own right.
Ethylbenzene	100-41-4	202-849-4	Present	Present	(3)-60; (3)-28	KE-13532	Present	HSR001151

SECTION 16. OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
ATE: Acute Toxicity Estimate
AICS: Australian Inventory of Chemical Substances
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CNS: Central Nervous System
CSA: Canadian Standards Association
DOT: Department of Transportation
EC50: Effective Concentration 50%.
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
IMDG: International Maritime Dangerous Goods
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: No observable effect concentration
NTP: National Toxicology Program
NJ: New Jersey
NOEC: No observable effect concentration

SAFETY DATA SHEET

OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TPQ: Threshold Planning Quantity
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References : Canadian Centre for Occupational Health and Safety (CCOHS), CCInfoWeb databases, 2015 (CHEMINFO, HSDB and RTECS).
OECD- The Global Portal to Information on Chemical Substances - eChemPortal, 2015
European Chemicals Agency, Classification Legislation, 2015
Material Safety Data Sheet from manufacturer
Information taken from reference works and the literature.

Preparation Date (mm/dd/yyyy)

: 06/01/2015

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Prepared for: FPPF Chemical Company, Inc. 117 West Tupper Street Buffalo, NY, USA 14201 Telephone: 1-800-735-3773 Please direct all enquiries to FPPF Chemical Company	
Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com	

DISCLAIMER

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc using information provided by / obtained from FPPF Chemical Company, Inc and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and FPPF Chemical Company, Inc expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.
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END OF DOCUMENT

Material Safety Data Sheet

DOW CHEMICAL CANADA ULC

Product name: FROTH-PAK™ 120REF 1.75 HFC Insulating Foam Sealant

Issue Date: 11/20/2014

Print Date: 06/30/2015

DOW CHEMICAL CANADA ULC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: FROTH-PAK™ 120REF 1.75 HFC Insulating Foam Sealant

Recommended use of the chemical and restrictions on use
Identified uses: Component(s) for the manufacture of urethane polymers. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION
DOW CHEMICAL CANADA ULC
SUITE 2100
450 - 1ST STREET S.W.
CALGARY AB T2P 5H1
CANADA

For MSDS Updates and Product Information: 800-258-2436
Prepared by: Prepared for use in Canada by EH&S, Hazard Communications.
Revision Date: 11/20/2014
Print Date: 06/30/2015

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 613-996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Physical state	Liquid.
Color	Yellow
Odor	Characteristic

Hazard Summary	**CAUTION!!** May cause eye irritation. May be harmful if inhaled. Vapor reduces oxygen available for breathing. May cause anesthetic effects. May cause central nervous system effects; may cause respiratory tract irritation. Isolate area. Keep upwind of spill. Contents under pressure.

Potential Health Effects

Eyes: May cause slight eye irritation.
May cause slight temporary corneal injury.

Skin: Prolonged contact may cause slight skin irritation with local redness.
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: Prolonged excessive exposure may cause adverse effects.
In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen.
May cause respiratory irritation and central nervous system depression.
Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats).
Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Ingestion: Low toxicity if swallowed.
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Signs and symptoms of excessive exposure may include:
May cause lacrimation (tears).
Salivation.
Convulsions.
Tremors.
Increased activity (hyperactivity).
Based on physical properties, not likely to be an aspiration hazard.

Chronic Exposure: Contains a component which is reported to be a weak organophosphate-type cholinesterase inhibitor.
Excessive exposure may produce organophosphate type cholinesterase inhibition.
Signs and symptoms of excessive exposure may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.
Contains component(s) which have been reported to cause effects on the following organs in animals: Heart.
Contains component(s) which, in laboratory animals, have been toxic to the fetus at doses nontoxic to the mother.
Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.
In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Construction and composite applications
This product is a mixture.

Component	CASRN	Weight percent	
1,1,1,2-Tetrafluoroethane	811-97-2	>= 10.0 - <= 30.0 %	
Glycerol propylene oxide polymer	25791-96-2	>= 10.0 - <= 30.0 %	
Polyester polyol, aromatic	Not available	>= 10.0 - <= 30.0 %	
Sucrose , propylene oxide	9049-71-2	>= 10.0 - <= 30.0 %	
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 10.0 - <= 30.0 %	Hazardous components
1,1,1,3,3 - Pentafluoropropane	460-73-1	>= 1.0 - <= 10.0 %	
Triethyl phosphate	78-40-0	>= 1.0 - <= 5.0 %	Hazardous components
Ethylene glycol	107-21-1	> 0.1 - < 1.0 %	Hazardous components

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. This material is a cholinesterase inhibitor. Treat symptomatically. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration. Atropine, only by injection, is the

preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. Attempt seizure control with diazepam 5-10 mg (adults) intravenous over 2-3 minutes. Repeat every 5-10 minutes as needed. Monitor for hypotension, respiratory depression, and need for intubation. Consider second agent if seizures persist after 30 mg. If seizures persist or recur administer phenobarbital 600-1200 mg (adults) intravenous diluted in 60 ml 0.9% saline given at 25-50 mg/minute. Evaluate for hypoxia, dysrhythmia, electrolyte disturbance, hypoglycemia (treat adults with dextrose 100 mg intravenous). If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen halides.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Blowing agent vaporizes quickly at room temperature. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. Refer to section 7, Handling, for additional precautionary measures.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Sawdust. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. This material is hygroscopic in nature. Contents under pressure. Do not puncture or incinerate container. Do not enter confined spaces unless adequately ventilated. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Conditions for safe storage: Store under cover in a dry, clean, cool, well ventilated place away from sunlight. Blowing agent may migrate from product and accumulate in some storage situations.

Storage stability

Storage temperature:	**Storage Period:**
24 °C	15 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
1,1,1,2-Tetrafluoroethane	US WEEL	TWA	1,000 ppm
1,1,1,3,3 - Pentafluoropropane	US WEEL	TWA	300 ppm
Triethyl phosphate	US WEEL	TWA	7.45 mg/m3
Ethylene glycol	ACGIH	C Aerosol only	100 mg/m3
	Dow IHG	TWA	50 mg/m3
	Dow IHG	STEL	100 mg/m3
	CA AB OEL	©	100 mg/m3
	CA BC OEL	TWA particulate	10 mg/m3
	CA BC OEL	STEL particulate	20 mg/m3
	CA BC OEL	C aerosol	100 mg/m3
	CA BC OEL	C Vapour	50 ppm

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CA QC OEL	C Vapour and mist	127 mg/m3	50 ppm

Consult local authorities for recommended exposure limits.

Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Color	Yellow
Odor	Characteristic
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	**closed cup** > 100 °C *Estimated.*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids

Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.18 *Calculated.*
Water solubility	No test data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	2,240 cSt *ASTM D4878*
Explosive properties	Not explosive
Oxidizing properties	No
Molecular weight	no data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Will not occur by itself.

Conditions to avoid: Product can oxidize at elevated temperatures. Elevated temperatures can cause pressure buildup in closed containers due to the release of blowing agents. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Alcohols. Ethers. Hydrocarbons. Hydrogen halides. Ketones. Polymer fragments.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

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Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Signs and symptoms of excessive exposure may include: May cause lacrimation (tears). Salivation. Convulsions. Tremors. Increased activity (hyperactivity).

As product: Single dose oral LD50 has not been determined.
LD50, rat, > 2,000 mg/kg Estimated.

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.
LD50, rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity
Prolonged excessive exposure may cause adverse effects. In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. May cause respiratory irritation and central nervous system depression. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
As product: The LC50 has not been determined.

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation
May cause slight eye irritation.
May cause slight temporary corneal injury.

Sensitization
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Contains a component which is reported to be a weak organophosphate-type cholinesterase inhibitor.
Contains component(s) which have been reported to cause effects on the following organs in animals:
Heart.
Liver.

Carcinogenicity
No relevant data found.

Teratogenicity
Contains component(s) which, in laboratory animals, have been toxic to the fetus at doses nontoxic to the mother. Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

Reproductive toxicity
In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity
Genetic toxicity studies on tested components were predominantly negative. Contains component(s) which were negative in some animal genetic toxicity studies and positive in others.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

1,1,1,2-Tetrafluoroethane
Acute inhalation toxicity
LC50, rat, 4 Hour, vapour, > 1,500 mg/l

Glycerol propylene oxide polymer
Acute inhalation toxicity
The LC50 has not been determined.

Polyester polyol, aromatic
Acute inhalation toxicity
The LC50 has not been determined.

Sucrose , propylene oxide
Acute inhalation toxicity
Typical for this family of materials. No deaths occurred following exposure to a saturated atmosphere.

Tris(1-chloro-2-propyl) phosphate
Acute inhalation toxicity
LC50, rat, 4 Hour, dust/mist, > 7 mg/l

1,1,1,3,3 - Pentafluoropropane
Acute inhalation toxicity
LC50, rat, 4 Hour, vapour, 1,096 mg/l

Triethyl phosphate
Acute inhalation toxicity
LC50, rat, 4 Hour, dust/mist, > 2.35 mg/l No deaths occurred at this concentration.

Ethylene glycol
Acute inhalation toxicity
LC50, rat, male and female, 6 Hour, dust/mist, > 2.5 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

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Toxicity

1,1,1,2-Tetrafluoroethane

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 450 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 980 mg/l

Toxicity to bacteria
EC50, Pseudomonas putida, static test, 6 Hour, Growth inhibition, > 730 mg/l

Glycerol propylene oxide polymer

Acute toxicity to fish
For this family of materials:
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), semi-static test, 21 d, mortality, >= 10 mg/l
LOEC, Daphnia magna (Water flea), semi-static test, 21 d, mortality, > 10 mg/l

Polyester polyol, aromatic

Acute toxicity to fish
No relevant data found.

Sucrose , propylene oxide

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Danio rerio (zebra fish), static test, 96 Hour, 6,310 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 9,890 mg/l, OECD Test Guideline 202 or Equivalent

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), semi-static test, 21 d, mortality, >= 10 mg/l
LOEC, Daphnia magna (Water flea), semi-static test, 21 d, mortality, > 10 mg/l

Tris(1-chloro-2-propyl) phosphate

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 84 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 131 mg/l

Acute toxicity to algae/aquatic plants

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ErC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth rate inhibition, 82 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 3 Hour, 784 mg/l, OECD 209 Test

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 32 mg/l
LOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, > 32 mg/l

1,1,1,3,3 - Pentafluoropropane

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Selenastrum capricornutum (green algae), static test, 72 Hour, Growth rate, > 118 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), semi-static test, 14 d, mortality, 29 mg/l

Triethyl phosphate

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Leuciscus idus (Golden orfe), static test, 48 Hour, 2,140 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 350 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EC50, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate inhibition, 900 mg/l, OECD Test Guideline 201

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 30 min, > 2,985 mg/l, OECD 209 Test

Ethylene glycol

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 72,860 mg/l, Other guidelines

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate inhibition, 6,500 - 13,000 mg/l, Other guidelines

Toxicity to bacteria
EC50, activated sludge, 30 min, 225 mg/l, OECD 209 Test

Persistence and degradability

1,1,1,2-Tetrafluoroethane
Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 0.47 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: Radicaux OH
Atmospheric half-life: 1,700 d
Method: Estimated.

Glycerol propylene oxide polymer
Biodegradability: For this family of materials: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

Polyester polyol, aromatic
Biodegradability: No relevant data found.

Sucrose , propylene oxide
Biodegradability: Based on information for a similar material: Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

Tris(1-chloro-2-propyl) phosphate
Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 14 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
10-day Window: Not applicable
Biodegradation: 95 %
Exposure time: 64 d
Method: OECD Test Guideline 302A or Equivalent

Theoretical Oxygen Demand: 1.17 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: Radicaux OH
Atmospheric half-life: 0.24 d
Method: Estimated.

1,1,1,3,3 - Pentafluoropropane

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 8 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 0.60 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: Radicaux OH
Atmospheric half-life: 360 d
Method: Estimated.

Triethyl phosphate

Biodegradability: Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Not applicable
Biodegradation: > 90 %
Exposure time: 28 d
Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.58 mg/mg

Ethylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Pass
Biodegradation: 90 - 100 %
Exposure time: 10 d
Method: OECD Test Guideline 301A or Equivalent
10-day Window: Not applicable
Biodegradation: 90 %
Exposure time: 1 d
Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.29 mg/mg

Bioaccumulative potential

Bioaccumulation: No data available.

Mobility in soil

1,1,1,2-Tetrafluoroethane

Potential for mobility in soil is high (Koc between 50 and 150).

Partition coefficient(Koc): 97 Estimated.

Glycerol propylene oxide polymer
No relevant data found.

Polyester polyol, aromatic
No relevant data found.

Sucrose , propylene oxide
No relevant data found.

Tris(1-chloro-2-propyl) phosphate
Potential for mobility in soil is slight (Koc between 2000 and 5000).
Partition coefficient(Koc): 1300 Estimated.

1,1,1,3,3 - Pentafluoropropane
Potential for mobility in soil is medium (Koc between 150 and 500).
Partition coefficient(Koc): 280 Estimated.

Triethyl phosphate
Potential for mobility in soil is very high (Koc between 0 and 50).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient(Koc): 48 Estimated.

Ethylene glycol
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 1 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section10 Regulatory Information, MSDS Section 15

14. TRANSPORT INFORMATION

TDG
Proper shipping name CHEMICAL UNDER PRESSURE, N.O.S.

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UN number	UN 3500
Class	2.2
Packing group	

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.
UN number	UN 3500
Class	2.2
Packing group	
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Chemical under pressure, n.o.s.
UN number	UN 3500
Class	2.2
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Hazardous Products Act Information: CPR Compliance
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification
This product is not a "Controlled Product" under WHMIS.

Canadian Domestic Substances List (DSL) (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. OTHER INFORMATION

Product Literature

Additional information on this product may be obtained by calling your sales or customer service contact.

Revision
Identification Number: 101194191 / A208 / Issue Date: 11/20/2014 / Version: 5.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

©	ceiling occupational exposure limit
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	ceiling limit
CA AB OEL	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	Canada. British Columbia OEL
CA QC OEL	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
Dow IHG	Dow Industrial Hygiene Guideline
STEL	Short term exposure limit
TWA	time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW CHEMICAL CANADA ULC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

SAFETY DATA SHEET

DDP Specialty Electronic Materials US, LLC

Product name: FROTH-PAK™ 17gal REF 1.75 HFO POLY Spray Foam Sealant

Issue Date: 11/17/2024

Print Date: 12/05/2024

DDP Specialty Electronic Materials US, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: FROTH-PAK™ 17gal REF 1.75 HFO POLY Spray Foam Sealant

Recommended use of the chemical and restrictions on use
Identified uses: For industrial use. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION
DDP Specialty Electronic Materials US,
LLC
974 Centre Road, Building 730,
Wilmington DE 19805
UNITED STATES

Customer Information Number: 833-338-7668
SDSQuestion-NA@dupont.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 1-800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with 29 CFR 1910.1200
Gases under pressure - Liquefied gas
Eye irritation - Category 2A
Skin sensitisation - Category 1
Reproductive toxicity - Category 2
Simple Asphyxiant

Label elements
Hazard pictograms

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Signal word: **WARNING!**

Hazards
Contains gas under pressure; may explode if heated.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist or vapours.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before reuse.

Storage
Store locked up.
Protect from sunlight. Store in a well-ventilated place.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration

trans-1-Chloro-3,3,3-trifluoropropene	102687-65-0	>= 20.0 - < 30.0 %
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 10.0 - < 20.0 %
Triethyl phosphate	78-40-0	>= 5.0 - < 10.0 %
Polyethylene glycol	25322-68-3	>= 1.0 - < 5.0 %
2-Ethylhexanoic acid potassium salt	3164-85-0	>= 1.0 - < 5.0 %
Carbon dioxide	124-38-9	>= 1.0 - < 5.0 %
Diethylene glycol	111-46-6	>= 1.0 - < 5.0 %
Dimethylbis((1-oxoneodecyl)oxy)stannane	68928-76-7	>= 0.1 - < 1.0 %

4. FIRST AID MEASURES

Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove contaminated clothing immediately. Immediately wash skin with soap and plenty of water. Suitable emergency safety shower facility should be available in work area. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. In the case of skin irritation or allergic reactions see a physician.

Eye contact: In case of contact, immediately flush eye with plenty of water. Suitable emergency eye wash facility should be available in work area.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. If breathing is difficult, oxygen should be administered by qualified personnel. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen halides.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Blowing agent vaporizes quickly at room temperature. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Sawdust. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes. Avoid breathing vapor. Do not enter confined spaces unless adequately ventilated. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Flammable vapors may accumulate in some storage situations. Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Avoid temperatures above 50°C (122°F) See Section 10 for more specific information.

Storage stability
Storage Period: 24 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
trans-1-Chloro-3,3,3-trifluoropropene	US WEEL	TWA	800 ppm
Triethyl phosphate	US WEEL	TWA	7.45 mg/m3
Polyethylene glycol	US WEEL	TWA aerosol	10 mg/m3
Carbon dioxide	Dow IHG	TWA	5,000 ppm
	Dow IHG	STEL	30,000 ppm
	ACGIH	TWA	5,000 ppm
	ACGIH	STEL	30,000 ppm
	OSHA Z-1	TWA	9,000 mg/m3 5,000 ppm
	CAL PEL	PEL	9,000 mg/m3 5,000 ppm
	CAL PEL	STEL	54,000 mg/m3 30,000 ppm
	NIOSH REL	TWA	9,000 mg/m3 5,000 ppm

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	NIOSH REL	ST	54,000 mg/m3 30,000 ppm
Diethylene glycol	DUPONT AEL	AEL * Vapour	100 ppm
	US WEEL	TWA	10 mg/m3
Dimethylbis((1-oxoneodecyl)oxy)stannane	OSHA Z-1	TWA	0.1 mg/m3 , Tin
	ACGIH	TWA	0.1 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	ACGIH	STEL	0.2 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	CAL PEL	PEL	0.1 mg/m3 , Tin
	Further information: S: Skin		
	CAL PEL	STEL	0.2 mg/m3 , Tin
	Further information: S: Skin		

Exposure controls
Engineering measures: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures
Eye/face protection: Use safety glasses (with side shields). Where contact with the liquid is likely, chemical goggles are recommended.
Skin protection
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquefied gas
Color	yellow
Odor	No information available.
Odor Threshold	No data available
pH	No data available
Melting point/ range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	> 200 °C (> 392 °F)
Evaporation Rate (Butyl Acetate = 1)	Not available
Flammability (solid, gas)	Not applicable to liquids Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Water solubility	Not applicable
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No test data available
Kinematic Viscosity	No data available
Explosive properties	Not applicableNot explosive
Oxidizing properties	No data available
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Will not occur by itself.

Conditions to avoid: Product can oxidize at elevated temperatures. Elevated temperatures can cause pressure buildup in closed containers due to the release of blowing agents. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Alcohols. Ethers. Hydrocarbons. Hydrogen halides. Ketones. Polymer fragments.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Product test data not available. Refer to component data.

Acute dermal toxicity
Product test data not available. Refer to component data.

Acute inhalation toxicity
Product test data not available. Refer to component data.

Skin corrosion/irritation
Product test data not available. Refer to component data.

Serious eye damage/eye irritation
Product test data not available. Refer to component data.

Sensitization
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Product test data not available. Refer to component data.

Carcinogenicity
Product test data not available. Refer to component data.

Teratogenicity
Product test data not available. Refer to component data.

Reproductive toxicity

Product test data not available. Refer to component data.

Mutagenicity
Product test data not available. Refer to component data.

Aspiration Hazard
Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

trans-1-Chloro-3,3,3-trifluoropropene

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
LC50, Rat, 4 Hour, gas, 120000 ppm

Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
No relevant data found.

Sensitization
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
This material was not mutagenic in an Ames bacterial assay.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

Tris(1-chloro-2-propyl) phosphate

Acute oral toxicity
LD50, Rat, 1,101 mg/kg OECD Test Guideline 401

Acute dermal toxicity
LD50, Rabbit, > 2,000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity
An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration. LC50, Rat, 4 Hour, dust/mist, > 5 mg/l

Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.

Sensitization
Did not demonstrate the potential for contact allergy in mice.

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
In animal studies, did not interfere with reproduction.

Mutagenicity
Animal genetic toxicity studies were negative. In vitro genetic toxicity studies were negative.

Aspiration Hazard
No aspiration toxicity classification

Triethyl phosphate

Acute oral toxicity
LD50, Rat, 1,131 mg/kg

Acute dermal toxicity
LD50, Guinea pig, > 21,400 mg/kg

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 2.35 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.

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Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight corneal injury.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Triethyl phosphate is considered to be a weak cholinesterase inhibitor.
Excessive exposure may produce organophosphate type cholinesterase inhibition.
Signs and symptoms of excessive exposure may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity
In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Polyethylene glycol

Acute oral toxicity
Typical for this family of materials. LD50, Rat, > 10,000 mg/kg Estimated.

Acute dermal toxicity
Typical for this family of materials. LD50, Rabbit, > 20,000 mg/kg

Acute inhalation toxicity
Typical for this family of materials. LC50, Rat, 6 Hour, dust/mist, > 2.5 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged exposure not likely to cause significant skin irritation.
May cause more severe response if skin is abraded (scratched or cut).

Serious eye damage/eye irritation

May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
For this family of materials:
Did not cause allergic skin reactions when tested in humans.
For this family of materials, sensitization studies done in guinea pigs have been negative.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Recent findings of kidney failure and death in burn patients, as well as some studies using animal burn models, suggest that polyethylene glycol may have been a factor.
The use of topical applications containing this material may not be appropriate in severely burned patients.
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
Polyethylene glycols did not cause cancer in long-term animal studies.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

2-Ethylhexanoic acid potassium salt

Acute oral toxicity
Information given is based on data obtained from similar substances. LC50, Rat, 2,043 mg/kg OECD Test Guideline 401

Acute dermal toxicity
Information given is based on data obtained from similar substances. LD50, Rabbit, > 2,000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity
An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration. LC0, Rat, 4 Hour, dust/mist, > 0.11 mg/l OECD Test Guideline 403

Skin corrosion/irritation
Brief contact may cause severe skin irritation with pain and local redness.

Serious eye damage/eye irritation
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.
Information given is based on data obtained from similar substances.

No data available

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
Information given is based on data obtained from similar substances.

Carcinogenicity
No data available

Teratogenicity
Has caused birth defects in laboratory animals. Information given is based on data obtained from similar substances.

Reproductive toxicity
In animal studies, has been shown to interfere with fertility. Information given is based on data obtained from similar substances.

Mutagenicity
Animal genetic toxicity studies were negative. In vitro genetic toxicity studies were negative.
Information given is based on data obtained from similar substances.

Aspiration Hazard
No aspiration toxicity classification

Carbon dioxide

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
LC50, Rat, 4 hrs, gas, 58750 ppm

Skin corrosion/irritation
No hazard from gas.
Skin contact with the solid ("dry ice") may cause frostbite.
Liquid may cause frostbite upon skin contact.

Serious eye damage/eye irritation
No hazard from gas.
Eye contact with the solid ("dry ice") may cause freeze burns.
Liquid may cause frostbite.

Sensitization
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Experiments with humans and animals suggest that continued exposure to 1.5% carbon dioxide may alter physiological processes, such as acid-base and electrolyte balance in the blood, calcium-phosphorus metabolism, and neuroendrocrine activity.

Carcinogenicity
Available data are inadequate to evaluate carcinogenicity.

Teratogenicity
Available data are inadequate for evaluation of potential to cause birth defects.

Reproductive toxicity
Available data are inadequate to determine effects on reproduction.

Mutagenicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Diethylene glycol

Acute oral toxicity
In humans, expected to be moderately toxic if swallowed even though oral toxicity was low when tested in animals. Ingestion of quantities (approximately 65 mL (2 oz.) for diethylene glycol or 100 mL (3 oz.) for ethylene glycol) has caused death in humans. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. LD50, Rat, male, 19,600 mg/kg

Lethal Dose, Human, adult, 2 Ounces Estimated.

Acute dermal toxicity
LD50, Rabbit, 13,330 mg/kg

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 4.6 mg/l The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration.

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
Did not cause allergic skin reactions when tested in humans.
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Carcinogenicity
Diethylene glycol has been tested for carcinogenicity in animal studies and is not believed to pose a carcinogenic risk to man.

Teratogenicity
Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity.

Reproductive toxicity
Diethylene glycol did not interfere with reproduction in animal studies except at very high doses.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
No aspiration toxicity classification

Dimethylbis((1-oxoneodecyl)oxy)stannane

Acute oral toxicity
LD50, Rat, 892 mg/kg

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
The LC50 has not been determined.

Skin corrosion/irritation
Brief contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Sensitization
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
No relevant data found.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
Not mutagenic in Ames Test

Aspiration Hazard
No aspiration toxicity classification

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

trans-1-Chloro-3,3,3-trifluoropropene

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), Static, 96 Hour, 38 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna, 48 Hour, 82 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition, 106.7 mg/l
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 115 mg/l

Tris(1-chloro-2-propyl) phosphate

Acute toxicity to fish

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LC50, Pimephales promelas (fathead minnow), 96 Hour, 51 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 131 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 82 mg/l, OECD Test Guideline 201
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 42 mg/l, OECD Test Guideline 201

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 3 Hour, 784 mg/l, OECD 209 Test

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, 32 mg/l

Triethyl phosphate

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Leuciscus idus (Golden orfe), static test, 48 Hour, 2,140 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 350 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EC50, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate inhibition, 900 mg/l, OECD Test Guideline 201

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 30 min, > 2,985 mg/l, OECD 209 Test

Polyethylene glycol

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, > 10,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Skeletonema costatum (marine diatom), 72 Hour, Growth rate, > 100 mg/l

2-Ethylhexanoic acid potassium salt

Acute toxicity to fish
Information given is based on data obtained from similar substances.
LC50, Oryzias latipes (Orange-red killifish), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
Information given is based on data obtained from similar substances.
EC50, Daphnia magna (Water flea), 48 Hour, 85.4 mg/l

Acute toxicity to algae/aquatic plants
Information given is based on data obtained from similar substances.
EC50, Desmodesmus subspicatus (green algae), 96 Hour, 49.3 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, 25 mg/l

Carbon dioxide

Acute toxicity to fish
May decrease pH of aquatic systems to < pH 5 which may be toxic to aquatic organisms.
LC0, Oncorhynchus mykiss (rainbow trout), 1 Hour, 240 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates
Based on data from similar materials
NOEC, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

Diethylene glycol

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 75,200 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 24 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants
Based on data from similar materials
EC50, Selenastrum capricornutum (green algae), 96 Hour, 6,500 - 13,000 mg/l

Toxicity to bacteria
EC50, activated sludge, 3 Hour, > 1,000 mg/l, OECD 209 Test

Chronic toxicity to fish
Based on data from similar materials
NOEC, Pimephales promelas (fathead minnow), 7 d, 15,380 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, > 15,000 mg/l

Dimethylbis((1-oxoneodecyl)oxy)stannane

Acute toxicity to aquatic invertebrates
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
EC50, Daphnia magna (Water flea), 48 Hour, 39 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 7.6 mg/l, OECD Test Guideline 201

NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 1.2 mg/l, OECD Test Guideline 201

Toxicity to bacteria
For similar material(s):
EC50, Bacteria, 3 Hour, Respiration rates., 14 mg/l

Persistence and degradability

trans-1-Chloro-3,3,3-trifluoropropene
Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Tris(1-chloro-2-propyl) phosphate
Biodegradability: Not readily biodegradable.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Theoretical Oxygen Demand: 1.17 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 0.24 d
Method: Estimated.

Triethyl phosphate
Biodegradability: Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Not applicable
Biodegradation: > 90 %
Exposure time: 28 d
Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.58 mg/mg

Polyethylene glycol
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 85 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 1.67 mg/mg

2-Ethylhexanoic acid potassium salt

Biodegradability: Readily biodegradable. Information given is based on data obtained from similar substances.

Biodegradation: 99 %
Exposure time: 28 d

Carbon dioxide
Biodegradability: Biodegradation is not applicable.

Diethylene glycol
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 90 - 100 %
Exposure time: 20 d
Method: OECD Test Guideline 301A or Equivalent
10-day Window: Not applicable
Biodegradation: 82 - 98 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

Theoretical Oxygen Demand: 1.51 mg/mg

Dimethylbis((1-oxoneodecyl)oxy)stannane
Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Bioaccumulative potential

trans-1-Chloro-3,3,3-trifluoropropene
Bioaccumulation: No relevant data found.

Tris(1-chloro-2-propyl) phosphate
Bioaccumulation: Does not bioaccumulate.
Partition coefficient: n-octanol/water(log Pow): 2.68

Triethyl phosphate
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.80 Measured

Polyethylene glycol
Partition coefficient: n-octanol/water(log Pow): -0.698 Pow: 0.2 at 30 °C

2-Ethylhexanoic acid potassium salt
Bioaccumulation: Bioaccumulation is unlikely. Based on information for a similar material: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Carbon dioxide

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Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.83 Measured

Diethylene glycol
Bioaccumulation: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water(log Pow): -1.98 at 20 °C
Bioconcentration factor (BCF): 100 Fish Measured

Dimethylbis((1-oxoneodecyl)oxy)stannane
Partition coefficient: n-octanol/water(log Pow): 5.503

Mobility in soil

trans-1-Chloro-3,3,3-trifluoropropene
No relevant data found.

Triethyl phosphate
Potential for mobility in soil is very high (Koc between 0 and 50).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient (Koc): 48 Estimated.

Polyethylene glycol
No relevant data found.

2-Ethylhexanoic acid potassium salt
Based on information for a similar material:
Potential for mobility in soil is very high (Koc between 0 and 50).

Carbon dioxide
No relevant data found.

Diethylene glycol
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): < 1 Estimated.

Dimethylbis((1-oxoneodecyl)oxy)stannane
No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE

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INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Gases under pressure
Simple Asphyxiant
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Reproductive toxicity

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
This material does not contain any components with a CERCLA RQ.

Does not contain HFC.

Compliant with Title 42 Chapter 85 Clean Air Act: Subchapter VII American Innovation and Manufacturing Act of 2020, and Section 612 US EPA Significant New Alternatives Policy.

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	**CASRN**
Diethylene glycol	111-46-6
Carbon dioxide	124-38-9

California Prop. 65
This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the Active inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
HMIS

Health	Flammability	Physical Hazard
2*	1	3

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 12069390 / A749 / Issue Date: 11/17/2024 / Version: 3.2
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
AEL *	8 & 12 hr. TWA
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
DUPONT AEL	DuPont AEL (Acceptable Exposure Limit)
NIOSH REL	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
PEL	Permissible exposure limit
ST	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
STEL	Short-term exposure limit
TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations
AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control

Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DDP Specialty Electronic Materials US, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US

SAFETY DATA SHEET

DDP Specialty Electronic Materials US, LLC

Product name: FROTH-PAK™ 27gal REF 1.75 HFO POLY Spray Foam Sealant

Issue Date: 03/10/2023

Print Date: 10/06/2023

DDP Specialty Electronic Materials US, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: FROTH-PAK™ 27gal REF 1.75 HFO POLY Spray Foam Sealant

Recommended use of the chemical and restrictions on use
Identified uses: For industrial use. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION
DDP Specialty Electronic Materials US,
LLC
974 Centre Road, Building 730,
Wilmington DE 19805
UNITED STATES

Customer Information Number: 833-338-7668
SDSQuestion-NA@dupont.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 1-800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with 29 CFR 1910.1200
Gases under pressure - Liquefied gas
Eye irritation - Category 2A
Skin sensitisation - Category 1
Reproductive toxicity - Category 2
Simple Asphyxiant

Label elements
Hazard pictograms



Signal word: **WARNING!**

Hazards
Contains gas under pressure; may explode if heated.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist or vapours.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before reuse.

Storage
Store locked up.
Protect from sunlight. Store in a well-ventilated place.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration

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2-Ethylhexanoic acid potassium salt	3164-85-0	>= 1.0 - <= 10.0 %
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 10.0 - <= 30.0 %
Triethyl phosphate	78-40-0	>= 1.0 - <= 10.0 %
Carbon dioxide	124-38-9	>= 1.0 - < 5.0 %
trans-1-Chloro-3,3,3-trifluoropropene	102687-65-0	>= 10.0 - <= 30.0 %
Polyethylene glycol	25322-68-3	>= 1.0 - < 10.0 %
Polyester polyol	Not available	>= 20.0 - <= 80.0 %
Diethylene glycol	111-46-6	>= 1.0 - < 10.0 %
Dimethylbis((1-oxoneodecyl)oxy)stannane	68928-76-7	>= 0.25 - < 1.0 %
Nitrogen	7727-37-9	>= 0.1 - <= 0.5 %

4. FIRST AID MEASURES

Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove contaminated clothing immediately. Immediately wash skin with soap and plenty of water. Suitable emergency safety shower facility should be available in work area. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. In the case of skin irritation or allergic reactions see a physician.

Eye contact: In case of contact, immediately flush eye with plenty of water. Suitable emergency eye wash facility should be available in work area.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: Maintain adequate ventilation and oxygenation of the patient. If breathing is difficult, oxygen should be administered by qualified personnel. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen halides.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Blowing agent vaporizes quickly at room temperature. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Sawdust. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes. Avoid breathing vapor. Do not enter confined spaces unless adequately ventilated. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Flammable vapors may accumulate in some storage situations. Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Avoid temperatures above 50°C (122°F) See Section 10 for more specific information.

Storage stability
Storage Period: 15 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Triethyl phosphate	US WEEL	TWA	7.45 mg/m3
Carbon dioxide	Dow IHG	TWA	5,000 ppm
	Dow IHG	STEL	30,000 ppm
	ACGIH	TWA	5,000 ppm
	Further information: asphyxia: Asphyxia		
	ACGIH	STEL	30,000 ppm
	Further information: asphyxia: Asphyxia		
	OSHA Z-1	TWA	9,000 mg/m3 5,000 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	CAL PEL	PEL	9,000 mg/m3 5,000 ppm
	CAL PEL	STEL	54,000 mg/m3 30,000 ppm

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trans-1-Chloro-3,3,3-trifluoropropene	US WEEL	TWA	800 ppm
Polyethylene glycol	US WEEL	TWA aerosol	10 mg/m3
Diethylene glycol	DUPONT AEL	AEL * Vapour	100 ppm
	DUPONT AEL	AEL * Aerosol	10 mg/m3
	US WEEL	TWA	10 mg/m3
Dimethylbis((1-oxoneodecyl)oxy)stannane	OSHA Z-1	TWA	0.1 mg/m3 , Tin
	ACGIH	TWA	0.1 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	ACGIH	STEL	0.2 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	CAL PEL	PEL	0.1 mg/m3 , Tin
	Further information: S: Skin		
	CAL PEL	STEL	0.2 mg/m3 , Tin
	Further information: S: Skin		
Nitrogen	ACGIH		See Further information
	Further information: Asphyxia; (): Adopted values or notations enclosed are those for which changes are proposed in the NIC; See Notice of Intended Changes (NIC); D: Simple asphyxiant; see discussion covering Minimal Oxygen Content found in the 'Definitions and Notations' section following the NIC tables		
	CAL PEL		See Further information
	Further information: (h): A number of gases and vapors, when present in high concentrations, act primarily as asphyxiants without other adverse effects. A concentration limit is not included for each material because the limiting factor is the available oxygen. (Several of these materials present fire or explosion hazards.)		

Exposure controls
Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures
Eye/face protection: Use safety glasses (with side shields). Where contact with the liquid is likely, chemical goggles are recommended.
Skin protection
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

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Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquefied gas
Color	yellow
Odor	No information available.
Odor Threshold	No data available
pH	No data available
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	> 200 °C (> 392 °F)
Evaporation Rate (Butyl Acetate = 1)	Not available
Flammability (solid, gas)	Not applicable to liquids Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Water solubility	Not applicable
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No test data available
Kinematic Viscosity	No data available
Explosive properties	Not applicableNot explosive
Oxidizing properties	No data available
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Will not occur by itself.

Conditions to avoid: Product can oxidize at elevated temperatures. Elevated temperatures can cause pressure buildup in closed containers due to the release of blowing agents. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Alcohols. Ethers. Hydrocarbons. Hydrogen halides. Ketones. Polymer fragments.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Product test data not available. Refer to component data.

Acute dermal toxicity
Product test data not available. Refer to component data.

Acute inhalation toxicity
Product test data not available. Refer to component data.

Skin corrosion/irritation
Product test data not available. Refer to component data.

Serious eye damage/eye irritation
Product test data not available. Refer to component data.

Sensitization
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Product test data not available. Refer to component data.

Carcinogenicity
Product test data not available. Refer to component data.

Teratogenicity
Product test data not available. Refer to component data.

Reproductive toxicity
Product test data not available. Refer to component data.

Mutagenicity
Product test data not available. Refer to component data.

Aspiration Hazard
Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

2-Ethylhexanoic acid potassium salt

Acute oral toxicity
Information given is based on data obtained from similar substances. LC50, Rat, 2,043 mg/kg OECD Test Guideline 401

Acute dermal toxicity
Information given is based on data obtained from similar substances. LD50, Rabbit, > 2,000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity
An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration. LC0, Rat, 4 Hour, dust/mist, > 0.11 mg/l OECD Test Guideline 403

Skin corrosion/irritation
Brief contact may cause severe skin irritation with pain and local redness.

Serious eye damage/eye irritation
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.
Information given is based on data obtained from similar substances.

No data available

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
Information given is based on data obtained from similar substances.

Carcinogenicity
No data available

Teratogenicity
Has caused birth defects in laboratory animals. Information given is based on data obtained from similar substances.

Reproductive toxicity
In animal studies, has been shown to interfere with fertility. Information given is based on data obtained from similar substances.

Mutagenicity
Animal genetic toxicity studies were negative. In vitro genetic toxicity studies were negative.
Information given is based on data obtained from similar substances.

Aspiration Hazard
No aspiration toxicity classification

Tris(1-chloro-2-propyl) phosphate

Acute oral toxicity
LD50, Rat, male and female, >1,000 mg/kg

Acute dermal toxicity
LD50, Rabbit, > 5,000 mg/kg

Acute inhalation toxicity
No deaths occurred at this concentration. LC50, Rat, 4 Hour, dust/mist, > 7 mg/l

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.

Sensitization
Did not cause allergic skin reactions when tested in humans.
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No data available.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
No relevant data found.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
No relevant data found.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

Triethyl phosphate

Acute oral toxicity
LD50, Rat, 1,131 mg/kg

Acute dermal toxicity
LD50, Guinea pig, > 21,400 mg/kg

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 2.35 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight corneal injury.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Triethyl phosphate is considered to be a weak cholinesterase inhibitor.
Excessive exposure may produce organophosphate type cholinesterase inhibition.
Signs and symptoms of excessive exposure may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.

Carcinogenicity
No relevant data found.

Teratogenicity

No relevant data found.

Reproductive toxicity
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity
In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Carbon dioxide

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
LC50, Rat, 4 hrs, gas, 58750 ppm

Skin corrosion/irritation
No hazard from gas.
Skin contact with the solid ("dry ice") may cause frostbite.
Liquid may cause frostbite upon skin contact.

Serious eye damage/eye irritation
No hazard from gas.
Eye contact with the solid ("dry ice") may cause freeze burns.
Liquid may cause frostbite.

Sensitization
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Experiments with humans and animals suggest that continued exposure to 1.5% carbon dioxide may alter physiological processes, such as acid-base and electrolyte balance in the blood, calcium-phosphorus metabolism, and neuroendrocrine activity.

Carcinogenicity
Available data are inadequate to evaluate carcinogenicity.

Teratogenicity
Available data are inadequate for evaluation of potential to cause birth defects.

Reproductive toxicity
Available data are inadequate to determine effects on reproduction.

Mutagenicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

trans-1-Chloro-3,3,3-trifluoropropene

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
LC50, Rat, 4 Hour, gas, 120000 ppm

Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
No relevant data found.

Sensitization
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
This material was not mutagenic in an Ames bacterial assay.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

Polyethylene glycol

Acute oral toxicity
Typical for this family of materials. LD50, Rat, > 10,000 mg/kg Estimated.

Acute dermal toxicity
Typical for this family of materials. LD50, Rabbit, > 20,000 mg/kg

Acute inhalation toxicity
Typical for this family of materials. LC50, Rat, 6 Hour, dust/mist, > 2.5 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged exposure not likely to cause significant skin irritation.
May cause more severe response if skin is abraded (scratched or cut).

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
For this family of materials:
Did not cause allergic skin reactions when tested in humans.
For this family of materials, sensitization studies done in guinea pigs have been negative.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Recent findings of kidney failure and death in burn patients, as well as some studies using animal burn models, suggest that polyethylene glycol may have been a factor.
The use of topical applications containing this material may not be appropriate in severely burned patients.
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
Polyethylene glycols did not cause cancer in long-term animal studies.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Diethylene glycol

Acute oral toxicity
In humans, expected to be moderately toxic if swallowed even though oral toxicity was low when tested in animals. Ingestion of quantities (approximately 65 mL (2 oz.) for diethylene glycol or 100 mL (3 oz.) for ethylene glycol) has caused death in humans. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. LD50, Rat, male, 19,600 mg/kg

Lethal Dose, Human, adult, 2 Ounces Estimated.

Acute dermal toxicity
LD50, Rabbit, 13,330 mg/kg

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 4.6 mg/l The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
Did not cause allergic skin reactions when tested in humans.
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Carcinogenicity
Diethylene glycol has been tested for carcinogenicity in animal studies and is not believed to pose a carcinogenic risk to man.

Teratogenicity
Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity.

Reproductive toxicity
Diethylene glycol did not interfere with reproduction in animal studies except at very high doses.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
No aspiration toxicity classification

Dimethylbis((1-oxoneodecyl)oxy)stannane

Acute oral toxicity
LD50, Rat, 892 mg/kg

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
The LC50 has not been determined.

Skin corrosion/irritation
Brief contact may cause skin irritation with local redness.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.

Sensitization
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
No relevant data found.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
Not mutagenic in Ames Test

Aspiration Hazard
No aspiration toxicity classification

Nitrogen

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
No adverse effects are anticipated from inhalation. In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen.

As product: The LC50 has not been determined.

Skin corrosion/irritation
Essentially nonirritating to skin.
Liquid may cause frostbite upon skin contact.

Serious eye damage/eye irritation
Essentially nonirritating to eyes.
Liquid may cause frostbite.
Liquid may cause severe eye irritation with corneal injury. Corneal burns may occur.

Sensitization
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
No relevant data found.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

2-Ethylhexanoic acid potassium salt

Acute toxicity to fish
Information given is based on data obtained from similar substances.
LC50, Oryzias latipes (Orange-red killifish), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
Information given is based on data obtained from similar substances.
EC50, Daphnia magna (Water flea), 48 Hour, 85.4 mg/l

Acute toxicity to algae/aquatic plants
Information given is based on data obtained from similar substances.
EC50, Desmodesmus subspicatus (green algae), 96 Hour, 49.3 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, 25 mg/l

Tris(1-chloro-2-propyl) phosphate

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 84 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 131 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth rate inhibition, 82 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 3 Hour, 784 mg/l, OECD 209 Test

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 32 mg/l

Triethyl phosphate

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Leuciscus idus (Golden orfe), static test, 48 Hour, 2,140 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 350 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EC50, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate inhibition, 900 mg/l, OECD Test Guideline 201

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 30 min, > 2,985 mg/l, OECD 209 Test

Carbon dioxide

Acute toxicity to fish
May decrease pH of aquatic systems to < pH 5 which may be toxic to aquatic organisms.
LC0, Oncorhynchus mykiss (rainbow trout), 1 Hour, 240 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates
Based on data from similar materials
NOEC, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

trans-1-Chloro-3,3,3-trifluoropropene

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), Static, 96 Hour, 38 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna, 48 Hour, 82 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition, 106.7 mg/l
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 115 mg/l

Polyethylene glycol

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, > 10,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Skeletonema costatum (marine diatom), 72 Hour, Growth rate, > 100 mg/l

Diethylene glycol

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 75,200 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 24 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants
Based on data from similar materials
EC50, Selenastrum capricornutum (green algae), 96 Hour, 6,500 - 13,000 mg/l

Toxicity to bacteria
EC50, activated sludge, 3 Hour, > 1,000 mg/l, OECD 209 Test

Chronic toxicity to fish
Based on data from similar materials
NOEC, Pimephales promelas (fathead minnow), 7 d, 15,380 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, > 15,000 mg/l

Dimethylbis((1-oxoneodecyl)oxy)stannane

Acute toxicity to aquatic invertebrates
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
EC50, Daphnia magna (Water flea), 48 Hour, 39 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 7.6 mg/l, OECD Test Guideline 201
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 1.2 mg/l, OECD Test Guideline 201

Toxicity to bacteria
For similar material(s):
EC50, Bacteria, 3 Hour, Respiration rates., 14 mg/l

Nitrogen

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Persistence and degradability

2-Ethylhexanoic acid potassium salt

Biodegradability: Readily biodegradable. Information given is based on data obtained from similar substances.

Biodegradation: 99 %
Exposure time: 28 d

Tris(1-chloro-2-propyl) phosphate

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Fail
Biodegradation: 14 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
10-day Window: Not applicable
Biodegradation: 95 %
Exposure time: 64 d
Method: OECD Test Guideline 302A or Equivalent

Theoretical Oxygen Demand: 1.17 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 0.24 d
Method: Estimated.

Triethyl phosphate

Biodegradability: Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Not applicable
Biodegradation: > 90 %
Exposure time: 28 d
Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.58 mg/mg

Carbon dioxide

Biodegradability: Biodegradation is not applicable.

trans-1-Chloro-3,3,3-trifluoropropene

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Polyethylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 85 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 1.67 mg/mg

Diethylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 90 - 100 %
Exposure time: 20 d
Method: OECD Test Guideline 301A or Equivalent
10-day Window: Not applicable
Biodegradation: 82 - 98 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

Theoretical Oxygen Demand: 1.51 mg/mg

Dimethylbis((1-oxoneodecyl)oxy)stannane

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

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Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Nitrogen

Biodegradability: Biodegradation is not applicable. May decrease the dissolved oxygen (DO) content of natural waters.

Bioaccumulative potential

2-Ethylhexanoic acid potassium salt

Bioaccumulation: Bioaccumulation is unlikely. Based on information for a similar material: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Tris(1-chloro-2-propyl) phosphate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.59 Measured
Bioconcentration factor (BCF): 0.8 - 4.6 Cyprinus carpio (Carp) 42 d Measured

Triethyl phosphate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.80 Measured

Carbon dioxide

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.83 Measured

trans-1-Chloro-3,3,3-trifluoropropene

Bioaccumulation: No relevant data found.

Polyethylene glycol

Partition coefficient: n-octanol/water(log Pow): -0.698 Pow: 0.2 at 30 °C

Diethylene glycol

Bioaccumulation: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water(log Pow): -1.98 at 20 °C
Bioconcentration factor (BCF): 100 Fish Measured

Dimethylbis((1-oxoneodecyl)oxy)stannane

Partition coefficient: n-octanol/water(log Pow): 5.503

Nitrogen

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Mobility in soil

2-Ethylhexanoic acid potassium salt

Based on information for a similar material:
Potential for mobility in soil is very high (Koc between 0 and 50).

Tris(1-chloro-2-propyl) phosphate

Potential for mobility in soil is slight (Koc between 2000 and 5000).
Partition coefficient (Koc): 1300 Estimated.

Triethyl phosphate

Potential for mobility in soil is very high (Koc between 0 and 50).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient (Koc): 48 Estimated.

Carbon dioxide

No relevant data found.

trans-1-Chloro-3,3,3-trifluoropropene

No relevant data found.

Polyethylene glycol

No relevant data found.

Diethylene glycol

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): < 1 Estimated.

Dimethylbis((1-oxoneodecyl)oxy)stannane

No relevant data found.

Nitrogen

No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section10 Regulatory Information, MSDS Section 15

14. TRANSPORT INFORMATION

DOT

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Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Gases under pressure
Simple Asphyxiant
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Reproductive toxicity

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
This material does not contain any components with a CERCLA RQ.

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Diethylene glycol	111-46-6
Carbon dioxide	124-38-9

California Prop. 65
This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
HMIS

Health	Flammability	Physical Hazard
2*	1	3

* = Chronic Effects (See Hazards Identification)

Revision
Identification Number: 12069387 / A749 / Issue Date: 03/10/2023 / Version: 3.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
AEL *	8 & 12 hr. TWA
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
DUPONT AEL	DuPont AEL (Acceptable Exposure Limit)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
PEL	Permissible exposure limit
STEL	Short-term exposure limit
TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations
AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DDP Specialty Electronic Materials US, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US

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SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: FROTH-PAK™ AF 120gal REF HFC ISO Spray Foam Sealant **Issue Date:** 06/07/2018

Print Date: 06/11/2018

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: FROTH-PAK™ AF 120gal REF HFC ISO Spray Foam Sealant

Recommended use of the chemical and restrictions on use
Identified uses: Component(s) for the manufacture of urethane polymers.

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: CHEMTREC +1 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with 29 CFR 1910.1200
Gases under pressure - Liquefied gas
Acute toxicity - Category 4 - Inhalation
Skin irritation - Category 2
Eye irritation - Category 2B
Respiratory sensitisation - Category 1
Skin sensitisation - Category 1
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

Label elements
Hazard pictograms



Signal word: **DANGER!**

Hazards
Contains gas under pressure; may explode if heated.
Causes skin and eye irritation.
May cause an allergic skin reaction.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary statements

Prevention
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
In case of inadequate ventilation wear respiratory protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Store in a well-ventilated place.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
Water Reactive

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 60.0 - <= 100.0 %
4,4'-Methylenediphenyl diisocyanate	101-68-8	30.0 - 60.0 %
1,1,1,2-Tetrafluoroethane	811-97-2	>= 5.0 - <= 10.0 %

Note
Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

4. FIRST AID MEASURES

Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen fluoride. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Product reacts with water. Reaction may produce heat and/or gases. This reaction may be violent. Container may rupture from gas generation in a fire situation. Vaporizes quickly at room temperature. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Dense smoke is emitted when burned without sufficient oxygen.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. If available, use foam to smother or suppress. Refer to section 7, Handling, for additional precautionary measures. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Vermiculite. Sand. Clay. Do NOT use absorbent materials such as: Cement powder (Note: may generate heat). Collect in suitable and properly labeled open containers. Do not place in sealed containers. Suitable containers include: Metal drums. Plastic drums. Polylined fiber pacs. Wash the spill site with large quantities of water. Attempt to neutralize by adding suitable decontaminant solution: Formulation 1: sodium carbonate 5 - 10%; liquid detergent 0.2 - 2%; water to make up to 100%, OR Formulation 2: concentrated ammonia solution 3 - 8%; liquid detergent 0.2 - 2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. Contact your supplier for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Use with adequate ventilation. Wash thoroughly after handling. This material is hygroscopic in nature. Keep container tightly closed. Do not enter confined spaces unless adequately ventilated. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Conditions for safe storage: Store in a dry place. Protect from atmospheric moisture. Do not store product contaminated with water to prevent potential hazardous reaction. See Section 10 for more specific information. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

Storage stability

Storage temperature:	**Storage Period:**
15 - 27 °C (59 - 81 °F)	6 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation

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4,4'-Methylenediphenyl diisocyanate	Dow IHG	TWA	0.005 ppm
	Dow IHG	STEL	0.02 ppm
	ACGIH	TWA	0.005 ppm
	OSHA Z-1	C	0.2 mg/m3 0.02 ppm
1,1,1,2-Tetrafluoroethane	US WEEL	TWA	1,000 ppm

Exposure controls

Engineering controls: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Chlorinated polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Viton. Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid.
Color	Brown
Odor	Musty

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Odor Threshold	0.4 ppm *Based on Literature for MDI.* Odor is inadequate warning of excessive exposure.
pH	*Not applicable*
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	**closed cup** Not applicable, Gas
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	225 lb/in2 at 54 °C (129 °F) Container is under pressure.
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.24 at 25 °C (77 °F) / 25 °C *Estimated.*
Water solubility	insoluble, reacts, evolution of CO2
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	No test data available
Explosive properties	Not explosive
Oxidizing properties	No
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Can occur.

Conditions to avoid: Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

Incompatible materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Strong oxidizers. Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Diisocyanates are not

soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat. Avoid unintended contact with polyols. The reaction of polyols and isocyanates generate heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation.

As product: Single dose oral LD50 has not been determined.
LD50, Rat, > 2,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.
LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
As product: The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness.
May stain skin.

Serious eye damage/eye irritation

May cause moderate eye irritation.
May cause slight temporary corneal injury.

Sensitization

Skin contact may cause an allergic skin reaction.
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

May cause allergic respiratory reaction.

MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.
Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause respiratory irritation.
Route of Exposure: Inhalation

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

Carcinogenicity
Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Teratogenicity
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

Reproductive toxicity
No relevant data found.

Mutagenicity
Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Diphenylmethane Diisocyanate, isomers and homologues

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, 0.49 mg/l

For similar material(s): 4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8). LC50, Rat, 1 Hour, Aerosol, 2.24 mg/l

For similar material(s): 2,4'-Diphenylmethane diisocyanate (CAS 5873-54-1). LC50, Rat, 4 Hour, Aerosol, 0.387 mg/l

4,4'-Methylenediphenyl diisocyanate

Acute inhalation toxicity
LC50, Rat, 1 Hour, dust/mist, 2.24 mg/l

1,1,1,2-Tetrafluoroethane

Acute inhalation toxicity
LC50, Rat, 4 Hour, vapour, > 1,500 mg/l

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12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Diphenylmethane Diisocyanate, isomers and homologues

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

4,4'-Methylenediphenyl diisocyanate

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:

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EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

1,1,1,2-Tetrafluoroethane

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 450 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 980 mg/l

Toxicity to bacteria
EC50, Pseudomonas putida, static test, 6 Hour, Growth inhibition, > 730 mg/l

Persistence and degradability

Diphenylmethane Diisocyanate, isomers and homologues

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

4,4'-Methylenediphenyl diisocyanate

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

1,1,1,2-Tetrafluoroethane

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 0.47 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 1,700 d
Method: Estimated.

Bioaccumulative potential

Diphenylmethane Diisocyanate, isomers and homologues

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

4,4'-Methylenediphenyl diisocyanate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

1,1,1,2-Tetrafluoroethane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 1.68 Estimated.

Mobility in soil

Diphenylmethane Diisocyanate, isomers and homologues

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

4,4'-Methylenediphenyl diisocyanate

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

1,1,1,2-Tetrafluoroethane

Potential for mobility in soil is high (Koc between 50 and 150).
Partition coefficient (Koc): 97 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Chemical under pressure, n.o.s.(1,1,1,2-Tetrafluoroethane)
UN number	UN 3500
Class	2.2
Packing group	
Reportable Quantity	MDI

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.(1,1,1,2-Tetrafluoroethane)
UN number	UN 3500
Class	2.2
Packing group	
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Chemical under pressure, n.o.s.(1,1,1,2-Tetrafluoroethane)
UN number	UN 3500
Class	2.2
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service

representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Gases under pressure
Hazard not otherwise classified (physical hazards)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Specific target organ toxicity (single or repeated exposure)

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components	**CASRN**
4,4'-Methylenediphenyl diisocyanate	101-68-8
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
Calculated RQ exceeds reasonably attainable upper limit.

Components	**CASRN**	**RQ (RCRA Code)**
4,4'-Methylenediphenyl diisocyanate	101-68-8	5000 lbs RQ

Pennsylvania Worker and Community Right-To-Know Act:
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Revision
Identification Number: 341168 / A001 / Issue Date: 06/07/2018 / Version: 9.1

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short term exposure limit
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations
AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and

understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US

SAFETY DATA SHEET

DDP Specialty Electronic Materials US, LLC

Product name: FROTH-PAK™ AF 27gal REF HFO ISO SLNT Foam Sealant

Issue Date: 03/14/2024

Print Date: 03/22/2024

DDP Specialty Electronic Materials US, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: FROTH-PAK™ AF 27gal REF HFO ISO SLNT Foam Sealant

Recommended use of the chemical and restrictions on use
Identified uses: For industrial use. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION
DDP Specialty Electronic Materials US,
LLC
974 Centre Road, Building 730,
Wilmington DE 19805
UNITED STATES

Customer Information Number: 833-338-7668
SDSQuestion-NA@dupont.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 1-800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with 29 CFR 1910.1200
Gases under pressure - Liquefied gas
Acute toxicity - Category 4 - Inhalation
Skin irritation - Category 2
Eye irritation - Category 2B
Respiratory sensitisation - Category 1
Skin sensitisation - Category 1
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2 - Inhalation
Simple Asphyxiant

Label elements
Hazard pictograms

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Signal word: **DANGER!**

Hazards
Contains gas under pressure; may explode if heated.
Causes skin and eye irritation.
May cause an allergic skin reaction.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.
May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention
Do not breathe mist or vapours.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
In case of inadequate ventilation wear respiratory protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Store in a well-ventilated place.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

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This product is a mixture.

Component	CASRN	Concentration
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	50.0 - <= 60.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	30.0 - <= 40.0 %
trans-1-Chloro-3,3,3-trifluoropropene	102687-65-0	> 1.0 - < 5.0 %
Carbon dioxide	124-38-9	>= 1.0 - < 5.0 %
Nitrogen	7727-37-9	>= 0.1 - < 0.5 %

Note
Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.
The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility. If breathing has stopped, apply artifical respiration.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

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Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen cyanide. Carbon monoxide. Carbon dioxide. Hydrogen halides. Halogenated hydrocarbons.

Unusual Fire and Explosion Hazards: Some components of this product will burn in a fire situation. Product reacts with water. Reaction may produce heat and/or gases. This reaction may be violent. Container may rupture from gas generation in a fire situation. Blowing agent vaporizes quickly at room temperature. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

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Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. See Section 10 for more specific information. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Do NOT use absorbent materials such as: Cement powder (Note: may generate heat). Contain spilled material if possible. Absorb with materials such as: Dirt. Vermiculite. Sand. Clay. Collect in suitable and properly labeled open containers. Isolate area until gas has dispersed. Apply vapor suppression foams until spill can be cleaned up. Knock down and dilute vapors with water fog or spray. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes. Avoid breathing vapor. Do not enter confined spaces unless adequately ventilated. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Flammable vapors may accumulate in some storage situations. Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Avoid temperatures above 50°C (122°F) See Section 10 for more specific information.

Storage stability
Storage Period: 24 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
4,4' -Methylenediphenyl diisocyanate	DUPONT AEL	AEL * Vapour	2.5 Parts per billion
	DUPONT AEL	AEL * Vapour	20 Parts per billion
	DUPONT AEL	AEL * particulate	0.025 mg/m3
	OSHA Z-1	C	0.2 mg/m3 0.02 ppm
	OSHA P0	C	0.2 mg/m3 0.02 ppm
	NIOSH REL	TWA	0.05 mg/m3 0.005 ppm
	NIOSH REL	C	0.2 mg/m3 0.02 ppm
trans-1-Chloro-3,3,3-trifluoropropene	US WEEL	TWA	800 ppm
Carbon dioxide	Dow IHG	TWA	5,000 ppm
	Dow IHG	STEL	30,000 ppm
	ACGIH	TWA	5,000 ppm
	ACGIH	STEL	30,000 ppm
	OSHA Z-1	TWA	9,000 mg/m3 5,000 ppm
	CAL PEL	PEL	9,000 mg/m3 5,000 ppm
	CAL PEL	STEL	54,000 mg/m3 30,000 ppm
	NIOSH REL	TWA	9,000 mg/m3 5,000 ppm
	NIOSH REL	ST	54,000 mg/m3 30,000 ppm
Nitrogen	ACGIH		See Further information
	Further information: Asphyxia; (): Adopted values or notations enclosed are those for which changes are proposed in the NIC; See Notice of Intended Changes (NIC); D: Simple asphyxiant; see discussion covering Minimal Oxygen Content found in the 'Definitions and Notations' section following the NIC tables		
	CAL PEL		See Further information
	Further information: (h): A number of gases and vapors, when present in high concentrations, act primarily as asphyxiants without other adverse effects. A concentration limit is not included for each material because the limiting factor is the available oxygen. (Several of these materials present fire or explosion hazards.)		

Exposure controls

Engineering measures: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. For escape purposes, carry an approved air-purifying respirator on person at all times.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquefied gas
Color	brown
Odor	musty
Odor Threshold	Odor is inadequate warning of excessive exposure.
pH	No data available
Melting point/range	No data available.
Freezing point	No data available.
Boiling point (760 mmHg)	No data available
Flash point	> 200 °C (> 392 °F)
Evaporation Rate (Butyl Acetate = 1)	Not available
Flammability (solid, gas)	Not expected to form explosive dust-air mixtures. *No information available.*
Lower explosion limit	Liquid.
Upper explosion limit	Liquid.
Vapor Pressure	Not available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.24 at 25 °C (77 °F) *Estimated.*

Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	no oxidising properties
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Can occur. Elevated temperatures can cause hazardous polymerization. Polymerization can be catalyzed by: Strong bases. Water.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose. Elevated temperatures can cause pressure buildup in closed containers due to the release of blowing agents. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

Incompatible materials: Avoid contact with: Acids. Alcohols. Amines. Water. Ammonia. Bases. Metal compounds. Moist air. Strong oxidizers. Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Diisocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat. Avoid contact with metals such as: Aluminum. Zinc. Brass. Tin. Copper. Galvanized metals. Avoid contact with absorbent materials such as: Moist organic absorbents. Avoid unintended contact with polyols. The reaction of polyols and isocyanates generate heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

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Product test data not available. Refer to component data.

Acute dermal toxicity
Product test data not available. Refer to component data.

Acute inhalation toxicity
Product test data not available. Refer to component data.

Skin corrosion/irritation
Product test data not available. Refer to component data.

Serious eye damage/eye irritation
Product test data not available. Refer to component data.

Sensitization
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

Carcinogenicity
Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Teratogenicity
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

Reproductive toxicity
Product test data not available. Refer to component data.

Mutagenicity
Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Aspiration Hazard
Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

Diphenylmethane Diisocyanate, isomers and homologues

Acute oral toxicity
Typical for this family of materials. LD50, Rat, > 10,000 mg/kg

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Acute dermal toxicity
Typical for this family of materials. LD50, Rabbit, > 9,400 mg/kg

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, 0.49 mg/l

For similar material(s): 4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8). LC50, Rat, 1 Hour, Aerosol, 2.24 mg/l

For similar material(s): 2,4'-Diphenylmethane diisocyanate (CAS 5873-54-1). LC50, Rat, 4 Hour, Aerosol, 0.387 mg/l

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.
May stain skin.

Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight temporary corneal injury.

Sensitization
Skin contact may cause an allergic skin reaction.
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

May cause allergic respiratory reaction.
MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.
Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause respiratory irritation.
Route of Exposure: Inhalation
Target Organs: Respiratory Tract

Reproductive toxicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

4,4' -Methylenediphenyl diisocyanate

Acute oral toxicity
LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.

Acute dermal toxicity
LD50, Rabbit, > 9,400 mg/kg

Acute inhalation toxicity
LC50, Rat, 1 Hour, dust/mist, 2.24 mg/l

Skin corrosion/irritation

Prolonged contact may cause moderate skin irritation with local redness.
Repeated contact may cause moderate skin irritation with local redness.
May stain skin.

Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight temporary corneal injury.

Sensitization
Skin contact may cause an allergic skin reaction.
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

May cause allergic respiratory reaction.
MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.
Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause respiratory irritation.
Route of Exposure: Inhalation
Target Organs: Respiratory Tract

Reproductive toxicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

trans-1-Chloro-3,3,3-trifluoropropene

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
LC50, Rat, 4 Hour, gas, 120000 ppm

Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
No relevant data found.

Sensitization
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Reproductive toxicity
No relevant data found.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

Carbon dioxide

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
LC50, Rat, 4 hrs, gas, 58750 ppm

Skin corrosion/irritation
No hazard from gas.
Skin contact with the solid ("dry ice") may cause frostbite.
Liquid may cause frostbite upon skin contact.

Serious eye damage/eye irritation
No hazard from gas.
Eye contact with the solid ("dry ice") may cause freeze burns.
Liquid may cause frostbite.

Sensitization
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Available data are inadequate to determine single exposure specific target organ toxicity.

Reproductive toxicity
Available data are inadequate to determine effects on reproduction.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Nitrogen

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity

No adverse effects are anticipated from inhalation. In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen.

As product: The LC50 has not been determined.

Skin corrosion/irritation
Essentially nonirritating to skin.
Liquid may cause frostbite upon skin contact.

Serious eye damage/eye irritation
Essentially nonirritating to eyes.
Liquid may cause frostbite.
Liquid may cause severe eye irritation with corneal injury. Corneal burns may occur.

Sensitization
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Reproductive toxicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Diphenylmethane Diisocyanate, isomers and homologues

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:

NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

4,4' -Methylenediphenyl diisocyanate

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

trans-1-Chloro-3,3,3-trifluoropropene

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), Static, 96 Hour, 38 mg/l, OECD Test Guideline 203

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Acute toxicity to aquatic invertebrates
EC50, Daphnia magna, 48 Hour, 82 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition, 106.7 mg/l
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 115 mg/l

Carbon dioxide

Acute toxicity to fish
May decrease pH of aquatic systems to < pH 5 which may be toxic to aquatic organisms.
LC0, Oncorhynchus mykiss (rainbow trout), 1 Hour, 240 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates
Based on data from similar materials
NOEC, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

Nitrogen

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Persistence and degradability

Diphenylmethane Diisocyanate, isomers and homologues

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

4,4' -Methylenediphenyl diisocyanate

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

trans-1-Chloro-3,3,3-trifluoropropene

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Carbon dioxide

Biodegradability: Biodegradation is not applicable.

Nitrogen

Biodegradability: Biodegradation is not applicable. May decrease the dissolved oxygen (DO) content of natural waters.

Bioaccumulative potential

Diphenylmethane Diisocyanate, isomers and homologues

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

4,4' -Methylenediphenyl diisocyanate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 4.51 at 22 °C
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

trans-1-Chloro-3,3,3-trifluoropropene

Bioaccumulation: No relevant data found.

Carbon dioxide

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.83 Measured

Nitrogen

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Mobility in soil

Diphenylmethane Diisocyanate, isomers and homologues

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

trans-1-Chloro-3,3,3-trifluoropropene

No relevant data found.

Carbon dioxide

No relevant data found.

Nitrogen

No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR

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MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	
Reportable Quantity	MDI

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Gases under pressure
Simple Asphyxiant
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Specific target organ toxicity (single or repeated exposure)

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components	CASRN
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9
4,4' -Methylenediphenyl diisocyanate	101-68-8

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
4,4' -Methylenediphenyl diisocyanate	101-68-8	5000 lbs RQ

Does not contain HFC.

Compliant with Title 42 Chapter 85 Clean Air Act: Subchapter VII American Innovation and Manufacturing Act of 2020, and Section 612 US EPA Significant New Alternatives Policy.

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Carbon dioxide	124-38-9

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the Active inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
HMIS

Health	Flammability	Physical Hazard
2*	1	3

* = Chronic Effects (See Hazards Identification)

Revision
Identification Number: 12069411 / A749 / Issue Date: 03/14/2024 / Version: 3.3
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
AEL *	15 minute TWA
C	Ceiling value not be exceeded at any time.
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
DUPONT AEL	DuPont AEL (Acceptable Exposure Limit)
NIOSH REL	USA. NIOSH Recommended Exposure Limits
OSHA P0	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
PEL	Permissible exposure limit
ST	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
STEL	Short term exposure limit
TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations
AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population

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(Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DDP Specialty Electronic Materials US, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US

SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: FROTH-PAK™ ISO INT AF HFC

Issue Date: 04/10/2015
Print Date: 06/25/2015

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: FROTH-PAK™ ISO INT AF HFC

Recommended use of the chemical and restrictions on use
Identified uses: Component(s) for the manufacture of urethane polymers.

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Acute toxicity - Category 4 - Inhalation
Skin irritation - Category 2
Eye irritation - Category 2B
Respiratory sensitisation - Category 1
Skin sensitisation - Category 1
Carcinogenicity - Category 2
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

Label elements
Hazard pictograms

® ™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow



Signal word: **DANGER!**

Hazards
Causes skin and eye irritation.
May cause an allergic skin reaction.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.

Precautionary statements

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Use personal protective equipment as required.
In case of inadequate ventilation wear respiratory protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
no data available

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Construction and composite applications
This product is a mixture.

Component	CASRN	Concentration
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 60.0 - <= 100.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	30.0 - 60.0 %
1,1,1,2-Tetrafluoroethane	811-97-2	>= 5.0 - <= 10.0 %

Note
Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen fluoride. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Product reacts with water. Reaction may produce heat and/or gases. This reaction may be violent. Container may rupture from gas generation in a fire situation. Vaporizes quickly at room temperature. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Dense smoke is emitted when burned without sufficient oxygen.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. If available, use foam to smother or suppress. Refer to section 7, Handling, for additional precautionary measures. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Vermiculite. Sand. Clay. Do NOT use absorbent materials such as: Cement powder (Note: may generate heat). Collect in suitable and properly labeled open containers. Do not place in sealed containers. Suitable containers include: Metal drums. Plastic drums. Polylined fiber pacs. Wash the spill site with large quantities of water. Attempt to neutralize by adding suitable decontaminant solution: Formulation 1: sodium carbonate 5 - 10%; liquid detergent 0.2 - 2%; water to make up to 100%, OR Formulation 2: concentrated ammonia solution 3 - 8%; liquid detergent 0.2 - 2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. Contact your supplier for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Use with adequate ventilation. Wash thoroughly after handling. Keep container tightly closed. Do not enter confined spaces unless adequately ventilated. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Conditions for safe storage: Store in a dry place. Protect from atmospheric moisture. Do not store product contaminated with water to prevent potential hazardous reaction. See Section 10 for more specific information. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

Storage stability

Storage temperature:	Storage Period:
15 - 27 °C (59 - 81 °F)	6 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
4,4' -Methylenediphenyl diisocyanate	ACGIH	TWA	0.005 ppm

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	OSHA Z-1	C	0.2 mg/m3 0.02 ppm
1,1,1,2-Tetrafluoroethane	US WEEL	TWA	1,000 ppm

Exposure controls
Engineering controls: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilationto control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Chlorinated polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Viton. Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid
Color	Brown
Odor	Musty
Odor Threshold	No test data available
pH	*Not applicable*
Melting point/range	No test data available
Freezing point	No test data available

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Boiling point (760 mmHg)	No test data available
Flash point	**closed cup** Not applicable, Gas
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	No
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	225 lb/in2 at 54 °C (129 °F) Container is under pressure.
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.24 at 25 °C (77 °F) / 25 °C *Estimated.*
Water solubility	insoluble, reacts, evolution of CO2
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	No test data available
Explosive properties	Not explosive
Oxidizing properties	No
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Can occur.

Conditions to avoid: Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

Incompatible materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Strong oxidizers. Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Diisocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat. Avoid unintended contact with polyols. The reaction of polyols and isocyanates generate heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation.

As product: Single dose oral LD50 has not been determined.
LD50, Rat, > 2,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.
LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
As product: The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness.
May stain skin.

Serious eye damage/eye irritation

May cause moderate eye irritation.
May cause slight temporary corneal injury.

Sensitization

Skin contact may cause an allergic skin reaction.
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

May cause allergic respiratory reaction.
MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.

Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause respiratory irritation.
Route of Exposure: Inhalation

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

Carcinogenicity
Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Teratogenicity
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

Reproductive toxicity
No relevant data found.

Mutagenicity
Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Diphenylmethane Diisocyanate, isomers and homologues

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, 0.49 mg/l

For similar material(s): 2,4'-Diphenylmethane diisocyanate (CAS 5873-54-1). LC50, Rat, 4 Hour, Aerosol, 0.31 mg/l

For similar material(s): 4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8). LC50, Rat, 1 Hour, Aerosol, 2.24 mg/l

4,4' -Methylenediphenyl diisocyanate

Acute inhalation toxicity
LC50, Rat, 1 Hour, dust/mist, 2.24 mg/l

1,1,1,2-Tetrafluoroethane

Acute inhalation toxicity
LC50, Rat, 4 Hour, vapour, > 1,500 mg/l

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12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity

Diphenylmethane Diisocyanate, isomers and homologues

Acute toxicity to fish

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms

EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants

EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

4,4' -Methylenediphenyl diisocyanate

Acute toxicity to fish

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

Based on information for a similar material:

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EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

1,1,1,2-Tetrafluoroethane

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 450 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 980 mg/l

Toxicity to bacteria
EC50, Pseudomonas putida, static test, 6 Hour, Growth inhibition, > 730 mg/l

Persistence and degradability

Diphenylmethane Diisocyanate, isomers and homologues

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

4,4' -Methylenediphenyl diisocyanate

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

1,1,1,2-Tetrafluoroethane

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 0.47 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 1,700 d
Method: Estimated.

Bioaccumulative potential

Diphenylmethane Diisocyanate, isomers and homologues

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

4,4' -Methylenediphenyl diisocyanate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

1,1,1,2-Tetrafluoroethane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 1.68 Estimated.

Mobility in soil

Diphenylmethane Diisocyanate, isomers and homologues

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

4,4' -Methylenediphenyl diisocyanate

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

1,1,1,2-Tetrafluoroethane

Potential for mobility in soil is high (Koc between 50 and 150).
Partition coefficient(Koc): 97 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local

laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Chemical under pressure, n.o.s.(FLUORINATED HYDROCARBONS)
UN number	UN 3500
Class	2.2
Packing group	
Reportable Quantity	MDI

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.(FLUORINATED HYDROCARBONS)
UN number	UN 3500
Class	2.2
Packing group	
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Chemical under pressure, n.o.s.(FLUORINATED HYDROCARBONS)
UN number	UN 3500
Class	2.2
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard
Chronic Health Hazard
Sudden Release of Pressure Hazard
Reactivity Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components	**CASRN**
4,4' -Methylenediphenyl diisocyanate	101-68-8
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9

Pennsylvania Worker and Community Right-To-Know Act:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Components	**CASRN**
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9
4,4' -Methylenediphenyl diisocyanate	101-68-8

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances knownto the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

:

16. OTHER INFORMATION

Revision
Identification Number: 101194148 / A001 / Issue Date: 04/10/2015 / Version: 7.0

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TWA	8-hour, time-weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

SAFETY DATA SHEET

DDP Specialty Electronic Materials US, LLC

Product name: Froth-Pak™ POLYOL HFO 650BF cylinder **Issue Date:** 06/02/2022

Print Date: 07/28/2022

DDP Specialty Electronic Materials US, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: Froth-Pak™ POLYOL HFO 650BF cylinder
Recommended use of the chemical and restrictions on use
Identified uses: For industrial use. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION
DDP Specialty Electronic Materials US,
LLC
974 Centre Road, Building 730,
Wilmington DE 19805
UNITED STATES

Customer Information Number: 833-338-7668
SDSQuestion-NA@dupont.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 1-800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with 29 CFR 1910.1200
Gases under pressure - Liquefied gas
Eye irritation - Category 2A
Skin sensitisation - Category 1
Reproductive toxicity - Category 2
Simple Asphyxiant

Label elements
Hazard pictograms

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Signal word: **WARNING!**

Hazards
Contains gas under pressure; may explode if heated.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist or vapours.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before reuse.

Storage
Store locked up.
Protect from sunlight. Store in a well-ventilated place.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration

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2-Ethylhexanoic acid potassium salt	3164-85-0	>= 1.0 - <= 10.0 %
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 10.0 - <= 30.0 %
Triethyl phosphate	78-40-0	>= 1.0 - <= 10.0 %
Carbon dioxide	124-38-9	>= 1.0 - < 5.0 %
trans-1-Chloro-3,3,3-trifluoropropene	102687-65-0	>= 10.0 - <= 30.0 %
Polyethylene glycol	25322-68-3	>= 1.0 - < 10.0 %
Polyester polyol	Not available	>= 20.0 - <= 80.0 %
Diethylene glycol	111-46-6	>= 1.0 - < 10.0 %
Dimethylbis((1-oxoneodecyl)oxy)stannane	68928-76-7	>= 0.25 - < 1.0 %
Nitrogen	7727-37-9	>= 0.1 - <= 0.5 %

4. FIRST AID MEASURES

Description of first aid measures
General advice:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove contaminated clothing immediately. Immediately wash skin with soap and plenty of water. Suitable emergency safety shower facility should be available in work area. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. In the case of skin irritation or allergic reactions see a physician.

Eye contact: In case of contact, immediately flush eye with plenty of water. Suitable emergency eye wash facility should be available in work area.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: Maintain adequate ventilation and oxygenation of the patient. If breathing is difficult, oxygen should be administered by qualified personnel. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen halides.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Blowing agent vaporizes quickly at room temperature. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Sawdust. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes. Avoid breathing vapor. Do not enter confined spaces unless adequately ventilated. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Flammable vapors may accumulate in some storage situations. Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Avoid temperatures above 50°C (122°F) See Section 10 for more specific information.

Storage stability
Storage Period: 15 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Triethyl phosphate	US WEEL	TWA	7.45 mg/m3
Carbon dioxide	Dow IHG	TWA	5,000 ppm
	Dow IHG	STEL	30,000 ppm
	ACGIH	TWA	5,000 ppm
	Further information: asphyxia: Asphyxia		
	ACGIH	STEL	30,000 ppm
	Further information: asphyxia: Asphyxia		
	OSHA Z-1	TWA	9,000 mg/m3 5,000 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	CAL PEL	PEL	9,000 mg/m3 5,000 ppm
	CAL PEL	STEL	54,000 mg/m3 30,000 ppm
trans-1-Chloro-3,3,3-trifluoropropene	US WEEL	TWA	800 ppm
Polyethylene glycol	US WEEL	TWA aerosol	10 mg/m3

Diethylene glycol	US WEEL	TWA	10 mg/m3
Dimethylbis((1-oxoneodecyl)oxy)stannane	OSHA Z-1	TWA	0.1 mg/m3 , Tin
	ACGIH	TWA	0.1 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	ACGIH	STEL	0.2 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	CAL PEL	PEL	0.1 mg/m3 , Tin
	Further information: S: Skin		
	CAL PEL	STEL	0.2 mg/m3 , Tin
	Further information: S: Skin		
Nitrogen	ACGIH		See Further information
	Further information: Asphyxia; (): Adopted values or notations enclosed are those for which changes are proposed in the NIC; See Notice of Intended Changes (NIC); D: Simple asphyxiant; see discussion covering Minimal Oxygen Content found in the 'Definitions and Notations' section following the NIC tables		
	CAL PEL		See Further information
	Further information: (h): A number of gases and vapors, when present in high concentrations, act primarily as asphyxiants without other adverse effects. A concentration limit is not included for each material because the limiting factor is the available oxygen. (Several of these materials present fire or explosion hazards.)		

Exposure controls
Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures
Eye/face protection: Use safety glasses (with side shields). Where contact with the liquid is likely, chemical goggles are recommended.
Skin protection
Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquefied gas
Color	yellow
Odor	No information available.
Odor Threshold	No data available
pH	No data available
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	> 200 °C (> 392 °F)
Evaporation Rate (Butyl Acetate = 1)	Not available
Flammability (solid, gas)	Not applicable to liquids Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Water solubility	Not applicable
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No test data available
Kinematic Viscosity	No data available
Explosive properties	Not applicableNot explosive
Oxidizing properties	No data available
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Will not occur by itself.

Conditions to avoid: Product can oxidize at elevated temperatures. Elevated temperatures can cause pressure buildup in closed containers due to the release of blowing agents. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Alcohols. Ethers. Hydrocarbons. Hydrogen halides. Ketones. Polymer fragments.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Product test data not available. Refer to component data.

Acute dermal toxicity
Product test data not available. Refer to component data.

Acute inhalation toxicity
Product test data not available. Refer to component data.

Skin corrosion/irritation
Product test data not available. Refer to component data.

Serious eye damage/eye irritation
Product test data not available. Refer to component data.

Sensitization
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Product test data not available. Refer to component data.

Carcinogenicity
Product test data not available. Refer to component data.

Teratogenicity
Product test data not available. Refer to component data.

Reproductive toxicity

Product test data not available. Refer to component data.

Mutagenicity
Product test data not available. Refer to component data.

Aspiration Hazard
Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

2-Ethylhexanoic acid potassium salt

Acute oral toxicity
Information given is based on data obtained from similar substances. LC50, Rat, 2,043 mg/kg OECD Test Guideline 401

Acute dermal toxicity
Information given is based on data obtained from similar substances. LD50, Rabbit, > 2,000 mg/kg OECD Test Guideline 402

Acute inhalation toxicity
An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration. LC0, Rat, 4 Hour, dust/mist, > 0.11 mg/l OECD Test Guideline 403

Skin corrosion/irritation
Brief contact may cause severe skin irritation with pain and local redness.

Serious eye damage/eye irritation
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.
Information given is based on data obtained from similar substances.

No data available

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.
Information given is based on data obtained from similar substances.

Carcinogenicity
No data available

Teratogenicity
Has caused birth defects in laboratory animals. Information given is based on data obtained from similar substances.

Reproductive toxicity

In animal studies, has been shown to interfere with fertility. Information given is based on data obtained from similar substances.

Mutagenicity
Animal genetic toxicity studies were negative. In vitro genetic toxicity studies were negative. Information given is based on data obtained from similar substances.

Aspiration Hazard
No aspiration toxicity classification

Tris(1-chloro-2-propyl) phosphate

Acute oral toxicity
LD50, Rat, male and female, >1,000 mg/kg

Acute dermal toxicity
LD50, Rabbit, > 5,000 mg/kg

Acute inhalation toxicity
No deaths occurred at this concentration. LC50, Rat, 4 Hour, dust/mist, > 7 mg/l

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.

Sensitization
Did not cause allergic skin reactions when tested in humans.
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No data available.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
No relevant data found.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
No relevant data found.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

Triethyl phosphate

Acute oral toxicity
LD50, Rat, 1,131 mg/kg

Acute dermal toxicity
LD50, Guinea pig, > 21,400 mg/kg

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 2.35 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight corneal injury.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Triethyl phosphate is considered to be a weak cholinesterase inhibitor.
Excessive exposure may produce organophosphate type cholinesterase inhibition.
Signs and symptoms of excessive exposure may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity
In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Carbon dioxide

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
LC50, Rat, 4 hrs, gas, 58750 ppm

Skin corrosion/irritation
No hazard from gas.
Skin contact with the solid ("dry ice") may cause frostbite.
Liquid may cause frostbite upon skin contact.

Serious eye damage/eye irritation
No hazard from gas.
Eye contact with the solid ("dry ice") may cause freeze burns.
Liquid may cause frostbite.

Sensitization
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Experiments with humans and animals suggest that continued exposure to 1.5% carbon dioxide may alter physiological processes, such as acid-base and electrolyte balance in the blood, calcium-phosphorus metabolism, and neuroendrocrine activity.

Carcinogenicity
Available data are inadequate to evaluate carcinogenicity.

Teratogenicity
Available data are inadequate for evaluation of potential to cause birth defects.

Reproductive toxicity
Available data are inadequate to determine effects on reproduction.

Mutagenicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

trans-1-Chloro-3,3,3-trifluoropropene

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity

LC50, Rat, 4 Hour, gas, 120000 ppm

Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
No relevant data found.

Sensitization
Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
This material was not mutagenic in an Ames bacterial assay.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

Polyethylene glycol

Acute oral toxicity
Typical for this family of materials. LD50, Rat, > 10,000 mg/kg Estimated.

Acute dermal toxicity
Typical for this family of materials. LD50, Rabbit, > 20,000 mg/kg

Acute inhalation toxicity
Typical for this family of materials. LC50, Rat, 6 Hour, dust/mist, > 2.5 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Prolonged exposure not likely to cause significant skin irritation.
May cause more severe response if skin is abraded (scratched or cut).

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
For this family of materials:
Did not cause allergic skin reactions when tested in humans.
For this family of materials, sensitization studies done in guinea pigs have been negative.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Recent findings of kidney failure and death in burn patients, as well as some studies using animal burn models, suggest that polyethylene glycol may have been a factor.
The use of topical applications containing this material may not be appropriate in severely burned patients.
Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity
Polyethylene glycols did not cause cancer in long-term animal studies.

Teratogenicity
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Diethylene glycol

Acute oral toxicity
In humans, expected to be moderately toxic if swallowed even though oral toxicity was low when tested in animals. Ingestion of quantities (approximately 65 mL (2 oz.) for diethylene glycol or 100 mL (3 oz.) for ethylene glycol) has caused death in humans. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. LD50, Rat, male, 19,600 mg/kg

Lethal Dose, Human, adult, 2 Ounces Estimated.

Acute dermal toxicity
LD50, Rabbit, 13,330 mg/kg

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 4.6 mg/l The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration.

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
Did not cause allergic skin reactions when tested in humans.
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Carcinogenicity
Diethylene glycol has been tested for carcinogenicity in animal studies and is not believed to pose a carcinogenic risk to man.

Teratogenicity
Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity.

Reproductive toxicity
Diethylene glycol did not interfere with reproduction in animal studies except at very high doses.

Mutagenicity
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
No aspiration toxicity classification

Dimethylbis((1-oxoneodecyl)oxy)stannane

Acute oral toxicity
LD50, Rat, 892 mg/kg

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
The LC50 has not been determined.

Skin corrosion/irritation
Brief contact may cause skin irritation with local redness.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.

Sensitization
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
No relevant data found.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
Not mutagenic in Ames Test

Aspiration Hazard
No aspiration toxicity classification

Nitrogen

Acute oral toxicity
Single dose oral LD50 has not been determined.

Acute dermal toxicity
The dermal LD50 has not been determined.

Acute inhalation toxicity
No adverse effects are anticipated from inhalation. In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen.

As product: The LC50 has not been determined.

Skin corrosion/irritation
Essentially nonirritating to skin.
Liquid may cause frostbite upon skin contact.

Serious eye damage/eye irritation
Essentially nonirritating to eyes.
Liquid may cause frostbite.
Liquid may cause severe eye irritation with corneal injury. Corneal burns may occur.

Sensitization
For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
No relevant data found.

Carcinogenicity
No relevant data found.

Teratogenicity
No relevant data found.

Reproductive toxicity
No relevant data found.

Mutagenicity
No relevant data found.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

2-Ethylhexanoic acid potassium salt

Acute toxicity to fish
Information given is based on data obtained from similar substances.
LC50, Oryzias latipes (Orange-red killifish), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
Information given is based on data obtained from similar substances.
EC50, Daphnia magna (Water flea), 48 Hour, 85.4 mg/l

Acute toxicity to algae/aquatic plants
Information given is based on data obtained from similar substances.
EC50, Desmodesmus subspicatus (green algae), 96 Hour, 49.3 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, 25 mg/l

Tris(1-chloro-2-propyl) phosphate

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 84 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 131 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth rate inhibition, 82 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 3 Hour, 784 mg/l, OECD 209 Test

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 32 mg/l

Triethyl phosphate

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Leuciscus idus (Golden orfe), static test, 48 Hour, 2,140 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 350 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EC50, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate inhibition, 900 mg/l, OECD Test Guideline 201

Toxicity to bacteria
EC50, activated sludge, Respiration inhibition, 30 min, > 2,985 mg/l, OECD 209 Test

Carbon dioxide

Acute toxicity to fish
May decrease pH of aquatic systems to < pH 5 which may be toxic to aquatic organisms.
LC0, Oncorhynchus mykiss (rainbow trout), 1 Hour, 240 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates
Based on data from similar materials
NOEC, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

trans-1-Chloro-3,3,3-trifluoropropene

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), Static, 96 Hour, 38 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna, 48 Hour, 82 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition, 106.7 mg/l
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 115 mg/l

Polyethylene glycol

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, > 10,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Skeletonema costatum (marine diatom), 72 Hour, Growth rate, > 100 mg/l

Diethylene glycol

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 75,200 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 24 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants
Based on data from similar materials
EC50, Selenastrum capricornutum (green algae), 96 Hour, 6,500 - 13,000 mg/l

Toxicity to bacteria
EC50, activated sludge, 3 Hour, > 1,000 mg/l, OECD 209 Test

Chronic toxicity to fish
Based on data from similar materials
NOEC, Pimephales promelas (fathead minnow), 7 d, 15,380 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, > 15,000 mg/l

Dimethylbis((1-oxoneodecyl)oxy)stannane

Acute toxicity to aquatic invertebrates
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
EC50, Daphnia magna (Water flea), 48 Hour, 39 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 7.6 mg/l, OECD Test Guideline 201
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, 1.2 mg/l, OECD Test Guideline 201

Toxicity to bacteria
For similar material(s):
EC50, Bacteria, 3 Hour, Respiration rates., 14 mg/l

Nitrogen

Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

Persistence and degradability

2-Ethylhexanoic acid potassium salt

Biodegradability: Readily biodegradable. Information given is based on data obtained from similar substances.

Biodegradation: 99 %
Exposure time: 28 d

Tris(1-chloro-2-propyl) phosphate

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Fail
Biodegradation: 14 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
10-day Window: Not applicable
Biodegradation: 95 %
Exposure time: 64 d
Method: OECD Test Guideline 302A or Equivalent

Theoretical Oxygen Demand: 1.17 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 0.24 d
Method: Estimated.

Triethyl phosphate

Biodegradability: Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Not applicable
Biodegradation: > 90 %
Exposure time: 28 d
Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.58 mg/mg

Carbon dioxide

Biodegradability: Biodegradation is not applicable.

trans-1-Chloro-3,3,3-trifluoropropene

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Polyethylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 85 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 1.67 mg/mg

Diethylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 90 - 100 %
Exposure time: 20 d
Method: OECD Test Guideline 301A or Equivalent
10-day Window: Not applicable
Biodegradation: 82 - 98 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

Theoretical Oxygen Demand: 1.51 mg/mg

Dimethylbis((1-oxoneodecyl)oxy)stannane

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Nitrogen

Biodegradability: Biodegradation is not applicable. May decrease the dissolved oxygen (DO) content of natural waters.

Bioaccumulative potential

2-Ethylhexanoic acid potassium salt

Bioaccumulation: Bioaccumulation is unlikely. Based on information for a similar material: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Tris(1-chloro-2-propyl) phosphate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.59 Measured
Bioconcentration factor (BCF): 0.8 - 4.6 Cyprinus carpio (Carp) 42 d Measured

Triethyl phosphate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.80 Measured

Carbon dioxide

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.83 Measured

trans-1-Chloro-3,3,3-trifluoropropene

Bioaccumulation: No relevant data found.

Polyethylene glycol

Partition coefficient: n-octanol/water(log Pow): -0.698 Pow: 0.2 at 30 °C

Diethylene glycol

Bioaccumulation: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water(log Pow): -1.98 at 20 °C
Bioconcentration factor (BCF): 100 Fish Measured

Dimethylbis((1-oxoneodecyl)oxy)stannane

Partition coefficient: n-octanol/water(log Pow): 5.503

Nitrogen

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Mobility in soil

2-Ethylhexanoic acid potassium salt

Based on information for a similar material:
Potential for mobility in soil is very high (Koc between 0 and 50).

Tris(1-chloro-2-propyl) phosphate

Potential for mobility in soil is slight (Koc between 2000 and 5000).
Partition coefficient (Koc): 1300 Estimated.

Triethyl phosphate

Potential for mobility in soil is very high (Koc between 0 and 50).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient (Koc): 48 Estimated.

Carbon dioxide

No relevant data found.

trans-1-Chloro-3,3,3-trifluoropropene

No relevant data found.

Polyethylene glycol

No relevant data found.

Diethylene glycol

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): < 1 Estimated.

Dimethylbis((1-oxoneodecyl)oxy)stannane

No relevant data found.

Nitrogen

No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section10 Regulatory Information, MSDS Section 15

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	

Classification for SEA transport (IMO-IMDG):

Proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Chemical under pressure, n.o.s.(Carbon dioxide, Nitrogen)
UN number	UN 3500
Class	2.2
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service

representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Gases under pressure
Simple Asphyxiant
Reproductive toxicity
Respiratory or skin sensitisation

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
This material does not contain any components with a CERCLA RQ.

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	**CASRN**
Diethylene glycol	111-46-6
Carbon dioxide	124-38-9

California Prop. 65
This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
HMIS

Health	Flammability	Physical Hazard
2*	1	3

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 12075964 / A749 / Issue Date: 06/02/2022 / Version: 2.2
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
PEL	Permissible exposure limit
STEL	Short-term exposure limit
TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Full text of other abbreviations
AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DDP Specialty Electronic Materials US, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US

Safety Data Sheet

SECTION 1 IDENTIFICATION

Gear Oil GL-1 SAE 90, 140

Recommended Use: Axle Oil
Restrictions on Use: Consult supplier when used other than those specified.
Product Number(s): 223036, 223037
Other means of identification: Not applicable
Company Identification
Chevron Canada Limited
500 - 5th Ave. SW
Calgary, ALBERTA T2P 0L7
Canada
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: (800) LUBE TEK

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:

- Reproductive toxicity (fertility): Category 2.



Signal Word: Warning
Health Hazards:
- Suspected of damaging fertility (H361F).

PRECAUTIONARY STATEMENTS:

Prevention:
- Obtain special instructions before use (P201).
- Do not handle until all safety precautions have been read and understood (P202).
- Wear protective gloves, protective clothing, eye protection, and face protection (P280).

Response:
- IF exposed or concerned: Get medical advice/attention (P308+P313).

Storage:
- Store locked up (P405).

Disposal:
- Dispose of contents and container in accordance with applicable local, regional, national, and international regulations (P501).

OTHER HAZARDS: Not applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS [Common Name; Synonym]	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15-C50) [Base oil; Mineral oil]	Mixture	70 - 99 %wt/wt
Phenyl-1-naphthylamine	90-30-2	0.1 - < 1 %wt/wt
Alkaryl amine*	Trade secret	0.1 - < 1 %wt/wt

Note that the actual concentration or concentration range of some or all of the above ingredients is considered confidential business information and is being withheld as permitted by WHMIS 2015.

*CANADIAN REGISTRATION:
HMIRA Registry Number: Pending / En attente
Filing Date: Pending / En attente
Claim for Exemption Granted: Pending / En attente

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To further remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR CHRONIC HEALTH EFFECTS:
Reproduction and Birth Defects: May cause adverse reproductive effects.

Indication of any immediate medical attention and special treatment needed Not Applicable

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
UNSUITABLE EXTINGUISHING MEDIA: No data available

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Observe all relevant local and international regulations. Eliminate all sources of ignition in vicinity of spilled material. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling
General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, and face protection.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling

this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

ENGINEERING CONTROLS:
Use general ventilation, local exhaust ventilation, or a combination of both.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.35	5
Neoprene	0.9	30
Nitrile	0.8	30
Polyvinyl Chloride (PVC)	1.1	15
Viton Butyl	0.3	120

Respiratory Protection: A site-specific risk assessment should be conducted by an Occupational Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved respirator such as:

Air purifying respirator -
If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.
Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).
Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).
Refer to respirator manufacturers to obtain service life of cartridge / filter.

Positive pressure air-supplying respirator -
If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

Occupational Exposure Limits:

Component	Country/ Agency	Form	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15-C50) [Base oil; Mineral oil]	ACGIH	--	5 mg/m3	10 mg/m3	--	--

NOTE ON OCCUPATIONAL EXPOSURE LIMITS: Consult local authorities for acceptable provincial values in Canada. Consult the Canadian Standards Association Standard Z94.4-2011 Selection, Use and Care of Respirators.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown to yellow
Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: Not available
Relative Vapor Density: Not available
Initial Boiling Point / Boiling Range: Not available
Solubility: Soluble in hydrocarbons; insoluble in water
Melting Point / Freezing Point: Not Applicable
Relative Density: Not tested/Not Measured
Particle Characteristics: Not applicable
Density: 0.8833 kg/l - 0.8956 kg/l @ 15°C (59°F) (Typical)
Kinematic Viscosity: 17 cSt28 cSt @ 100°C (212°F) (Minimum)
Coefficient of Therm. Expansion / °F: Not available

Decomposition temperature: Not available
Partition coefficient n-octanol/water (logarithmic value): Not available

FLAMMABLE PROPERTIES:
Flammability: Not Available

Flashpoint: (Cleveland Open Cup) 235 °C (455 °F) (Minimum)
Auto-ignition temperature: Not tested/Not Measured
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: None known (None expected)
Sensitivity to Mechanical Impact: No.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure: Exposure may occur via ingestion, inhalation, or skin and eye contact.

Information on toxicological effects
Serious Eye Damage/Irritation: The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Corrosion/Irritation: The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Sensitization: The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The material is not considered an oral toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components. For additional information on the acute toxicity of the components, call the technical information center.
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Carcinogenicity: The material is not considered a carcinogen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Reproductive Toxicity: This material is suspected of damaging fertility. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Single Exposure:
The material is not considered a target organ toxicant (single exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Specific Target Organ Toxicity - Repeated Exposure: The material is not considered a target organ toxicant (repeated exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Aspiration Hazard: The material is not considered an aspiration hazard.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).
These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

Most important symptoms and effects, both acute and delayed
IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR CHRONIC HEALTH EFFECTS:
Reproduction and Birth Defects: May cause adverse reproductive effects.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms.
The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is not expected to be readily biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Partition coefficient n-octanol/water (logarithmic value): No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods. (See B.C. Reg. GY/92 Waste Management Act; R.R.O. 1990, Reg. 347 General-Waste Management; C.C.SM.c. W40 The Waste Reduction and Prevention Act; N.S. Reg. 51/95 and N.S. Reg. 179/96 for examples of Provincial legislation.)

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

TC Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER TRANSPORT CANADA

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

DOT Shipping Description: NOT REGULATED AS HAZARDOUS MATERIAL UNDER 49 CFR

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).

SECTION 16 OTHER INFORMATION

REVISION STATEMENT:
SECTION 01 - Health Emergency information was modified.
SECTION 01 - Product Identifier information was modified.
SECTION 01 - Product Use information was deleted.
SECTION 02 - Hazard Statements information was added.
SECTION 02 - Health Classification information was added.
SECTION 02 - Pictogram information was added.
SECTION 02 - Precautionary Statements information was added.
SECTION 02 - Signal Word information was added.
SECTION 03 - Canadian Registration information was added.
SECTION 03 - Composition information was modified.
SECTION 03 - HMIRA Registry Number information was added.
SECTION 04 - Delayed Health Effects - Reproductive Toxicity information was modified.
SECTION 04 - First Aid - Skin information was modified.
SECTION 07 - Precautionary Measures information was added.
SECTION 08 - Engineering Control Measures information was modified.
SECTION 08 - Occupational Exposure Limit Table information was modified.
SECTION 08 - Personal Protective Equipment information was modified.
SECTION 09 - Physical/Chemical Properties information was modified.
SECTION 11 - Reproductive Toxicity information was modified.
SECTION 12 - Ecological Information information was added.
SECTION 12 - Ecological Information information was deleted.
SECTION 14 - DOT Classification information was added.
SECTION 14 - DOT Classification information was deleted.
SECTION 14 - ICAO Classification information was added.
SECTION 14 - ICAO Classification information was deleted.
SECTION 14 - IMO Classification information was added.
SECTION 14 - IMO Classification information was deleted.
SECTION 15 - Chemical Inventories information was deleted.
SECTION 15 - Chemical Inventories information was modified.

Revision Date: May 15, 2026

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
WHMIS - Workplace Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)

IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the WHMIS 2015 by Chevron.

The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 08-Jun-2025 **Version** 1

1. Identification

Product identifier

Product Name 6PK 16oz GLOSS BLK HIGH SOLID

Other means of identification

Product Code(s) IS085001-0

UN/ID no UN1950

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Restrictions on use No information available

Details of the supplier of the safety data sheet

Manufacturer Address
Diamond Vogel
N92 W14701 Anthony Avenue
Menomonee Falls, WI 53051
United States
Phone: (262) 255-9500
Website: diamondvogel.com
E-mail: info@diamondvogel.com

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

Flammable aerosols	Category 1
Gases under pressure	Liquefied gas
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)
Not applicable

Label elements



Danger

Hazard statements
Extremely flammable aerosol. Pressurized container: May burst if heated.
Contains gas under pressure; may explode if heated.
Harmful if inhaled.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Precautionary Statements - Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water and soap.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary Statements - Storage
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight.
Do not expose to temperatures exceeding 50 °C/122 °F.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Unknown acute toxicity
28.96732 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Other information
No information available.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Acetone	67-64-1	20 to <35	*
Propane	74-98-6	10 to <20	*
Butyl Acetate	123-86-4	10 to <20	*
Propylene Glycol Methyl Ether Acetate	108-65-6	5 to <10	*
Butane	106-97-8	5 to <10	*
Methyl N-Propyl Ketone	107-87-9	1 to <5	*
Aromatic 100	64742-95-6	0.1 to <1	*
Carbon Black	1333-86-4	0.1 to <1	*
Zirconium octoate	22464-99-9	0.1 to <1	*
Methyl Isobutyl Ketone	108-10-1	0.1 to <1	*
Methyl Ethyl Ketoxime	96-29-7	0.1 to <1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. In case of contact with liquefied gas, thaw frosted parts with lukewarm water.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information. Remove all sources of ignition. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Coughing and/ or wheezing. Difficulty in breathing.

Effects of Exposure May cause cancer. May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility. Mutagenic effects.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media
Large Fire Dry chemical. Carbon dioxide (CO2). Water spray.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by skin contact. Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cylinders may rupture under extreme heat. Damaged cylinders should be handled only by specialists. Containers may explode when heated. Ruptured cylinders may rocket.

Explosion data
Sensitivity to mechanical impact Yes.

Sensitivity to static discharge Yes.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists. See section 8 for more information. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Contents under pressure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

Other information Refer to protective measures listed in Sections 7 and 8. Ventilate the area.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Flood with water to complete polymerization and scrape off floor.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Avoid breathing vapors or mists. Use personal protection equipment. Use with local exhaust ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Take

necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use spark-proof tools and explosion-proof equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Keep in an area equipped with sprinklers. Do not puncture or incinerate cans. Contents under pressure. In case of rupture. Avoid contact with skin and eyes. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Protect from sunlight. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Acetone 67-64-1	STEL: 500 ppm TWA: 250 ppm	TWA: 1000 ppm TWA: 2400 mg/m³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m³ (vacated) STEL: 2400 mg/m³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors. (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m³
Propane 74-98-6	: See Appendix F: Minimal Oxygen Content, explosion hazard	TWA: 1000 ppm TWA: 1800 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m³
Butyl Acetate 123-86-4	STEL: 150 ppm TWA: 50 ppm	TWA: 150 ppm TWA: 710 mg/m³ (vacated) TWA: 150 ppm (vacated) TWA: 710 mg/m³ (vacated) STEL: 200 ppm (vacated) STEL: 950 mg/m³	IDLH: 1700 ppm TWA: 150 ppm TWA: 710 mg/m³ STEL: 200 ppm STEL: 950 mg/m³
Butane 106-97-8	STEL: 1000 ppm explosion hazard	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m³	IDLH: 1600 ppm TWA: 800 ppm TWA: 1900 mg/m³
Methyl N-Propyl Ketone 107-87-9	STEL: 150 ppm	TWA: 200 ppm TWA: 700 mg/m³ (vacated) TWA: 200 ppm (vacated) TWA: 700 mg/m³ (vacated) STEL: 250 ppm (vacated) STEL: 875 mg/m³	IDLH: 1500 ppm TWA: 150 ppm TWA: 530 mg/m³
Carbon Black 1333-86-4	TWA: 3 mg/m³ inhalable particulate matter	TWA: 3.5 mg/m³ (vacated) TWA: 3.5 mg/m³	IDLH: 1750 mg/m³ TWA: 3.5 mg/m³ TWA: 0.1 mg/m³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

Zirconium octoate 22464-99-9	STEL: 10 mg/m³ Zr TWA: 5 mg/m³ Zr	TWA: 5 mg/m³ Zr (vacated) TWA: 5 mg/m³ Zr (vacated) STEL: 10 mg/m³ Zr	IDLH: 25 mg/m³ Zr TWA: 5 mg/m³ except Zirconium tetrachloride Zr STEL: 10 mg/m³ Zr
Methyl Isobutyl Ketone 108-10-1	STEL: 75 ppm TWA: 20 ppm	TWA: 100 ppm TWA: 410 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 205 mg/m³ (vacated) STEL: 75 ppm (vacated) STEL: 300 mg/m³	IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m³ STEL: 75 ppm STEL: 300 mg/m³

Biological occupational exposure limits

Chemical name	ACGIH
Acetone 67-64-1	25 mg/L - urine (Acetone) - end of shift
Methyl Isobutyl Ketone 108-10-1	1 mg/L - urine (MIBK) - end of shift

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and after work.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Aerosol
Appearance	No information available
Color	No information available
Odor	No information available
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No data available	None known
pH (as aqueous solution)		None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	-96.1 °C / -141.0 °F	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known

Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	0.78	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	6.49 lbs/gal
Bulk density	No information available
Percent solids by weight	22.9%
Percent volatile by weight	77.1%
Percent solids by volume	15.2%
Actual VOC (lbs/gal)	3.6
Actual VOC (grams/liter)	427
EPA VOC (lbs/gal)	4.6
EPA VOC (grams/liter)	546

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Excessive heat. Heat, flames and sparks.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness. Harmful by inhalation. (based on components). Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with

susceptible persons. (based on components). May cause irritation. Prolonged contact may cause redness and irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Coughing and/ or wheezing.

Acute toxicity Harmful by inhalation.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 7,989.80 mg/kg
ATEmix (dermal) 16,107.80 mg/kg
ATEmix (inhalation-vapor) 19,389.50 mg/l
ATEmix (inhalation-dust/mist) 3.4967 mg/l

Unknown acute toxicity

28.96732 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Acetone 67-64-1	= 5800 mg/kg (Rat)	> 15700 mg/kg (Rabbit)	= 50100 mg/m³ (Rat) 8 h
Propane 74-98-6	-	-	> 800000 ppm (Rat) 15 min
Butyl Acetate 123-86-4	= 10768 mg/kg (Rat)	> 17600 mg/kg (Rabbit)	= 0.74 mg/L (Rat) 4 h
Propylene Glycol Methyl Ether Acetate 108-65-6	= 8532 mg/kg (Rat)	> 5 g/kg (Rabbit)	= 16000 mg/m³ (Rat) 6 h
Butane 106-97-8	-	-	= 658 g/m³ (Rat) 4 h
Methyl N-Propyl Ketone 107-87-9	= 1600 mg/kg (Rat)	= 6480 mg/kg (Rat)	2000 - 4000 ppm (Rat) 4 h
Aromatic 100 64742-95-6	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 h
Carbon Black 1333-86-4	> 10000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 4.6 mg/m³ (Rat) 4 h
Zirconium octoate 22464-99-9	> 5000 mg/kg (Rat)	-	-
Methyl Isobutyl Ketone 108-10-1	= 2080 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	2000 - 4000 ppm (Rat) 4 h
Methyl Ethyl Ketoxime 96-29-7	= 930 mg/kg (Rat)	1000 - 1800 mg/kg (Rabbit)	> 4.83 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Carbon Black 1333-86-4	A3	Group 2B	-	X
Methyl Isobutyl Ketone 108-10-1	A3	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Classification based on data available for ingredients. May damage fertility or the unborn child.

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

STOT - repeated exposure No information available.

Target organ effects Respiratory system, Eyes, Skin, Central nervous system.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Acetone 67-64-1	-	4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50	-	10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50
Butyl Acetate 123-86-4	674.7: 72 h Desmodesmus subspicatus mg/L EC50	100: 96 h Lepomis macrochirus mg/L LC50 static 17 - 19: 96 h Pimephales promelas mg/L LC50 flow-through	-	-
Propylene Glycol Methyl Ether	-	161: 96 h Pimephales	-	500: 48 h Daphnia

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Acetate 108-65-6		promelas mg/L LC50 static		magna mg/L EC50
Methyl N-Propyl Ketone 107-87-9	-	1190 - 1290: 96 h Pimephales promelas mg/L LC50 flow-through	-	-
Aromatic 100 64742-95-6	-	9.22: 96 h Oncorhynchus mykiss mg/L LC50	-	6.14: 48 h Daphnia magna mg/L EC50
Methyl Isobutyl Ketone 108-10-1	400: 96 h Pseudokirchneriella subcapitata mg/L EC50	496 - 514: 96 h Pimephales promelas mg/L LC50 flow-through	-	170: 48 h Daphnia magna mg/L EC50
Methyl Ethyl Ketoxime 96-29-7	83: 72 h Desmodesmus subspicatus mg/L EC50	777 - 914: 96 h Pimephales promelas mg/L LC50 flow-through 760: 96 h Poecilia reticulata mg/L LC50 static	-	750: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Acetone 67-64-1	-0.24
Propane 74-98-6	1.09
Butyl Acetate 123-86-4	1.81 2.3
Propylene Glycol Methyl Ether Acetate 108-65-6	1.2
Butane 106-97-8	2.31
Methyl N-Propyl Ketone 107-87-9	0.857
Methyl Isobutyl Ketone 108-10-1	1.9
Methyl Ethyl Ketoxime 96-29-7	0.65

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN/ID no	UN1950
Proper shipping name	Aerosols
Transport hazard class(es)	2.1
Reportable Quantity (RQ)	(Toluene: RQ (kg)= 0.454, Butyl Acetate: RQ (kg)= 2270.00, Acetone: RQ (kg)= 2270.00) Toluene: RQ (lb)= 1, Butyl Acetate: RQ (lb)= 5000.00, Acetone: RQ (lb)= 5000.00
Reportable quantity (kg) (calculated)	Toluene: RQ (kg)= 5386.00, Butyl Acetate: RQ (kg)= 15576.00, Acetone: RQ (kg)= 10445.00
Reportable quantity (lbs) (calculated)	Toluene: RQ (lb)= 11862.00, Butyl Acetate: RQ (lb)= 34308.00, Acetone: RQ (lb)= 23007.00
Special Provisions	N82
DOT Marine Pollutant	NP
Description	UN1950, Aerosols, 2.1
Emergency Response Guide Number	126

TDG

UN/ID no	UN1950
Proper shipping name	Aerosols
Transport hazard class(es)	2.1
Special Provisions	80, 107
Description	UN1950, Aerosols, 2.1

MEX

UN/ID no	UN1950
Proper shipping name	Aerosols
Transport hazard class(es)	2.1
Description	UN1950, Aerosols, 2.1
Special Provisions	190, 277, 327, 344, 63, 381

ICAO (air)

UN/ID no	UN1950
Proper shipping name	Aerosols
Transport hazard class(es)	2.1
Description	UN1950, Aerosols, 2.1
Special Provisions	A145, A167

IATA

UN number or ID number	UN1950
Proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Description	UN1950, Aerosols, flammable, 2.1
Special Provisions	A145, A167, A802

IMDG

UN number or ID number	UN1950
UN proper shipping name	Aerosols
Transport hazard class(es)	2.1
EmS-No	F-D, S-U
Special Provisions	63,190, 277, 327, 344, 381, 959
Marine pollutant	NP
Description	UN1950, Aerosols, 2.1

15. Regulatory information

International Inventories

TSCA	Complies

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Complies
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Methyl Isobutyl Ketone - 108-10-1	0.1

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Butyl Acetate 123-86-4	5000 lb	-	-	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Butyl Acetate 123-86-4	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Methyl Isobutyl Ketone 108-10-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Carbon Black - 1333-86-4	Carcinogen
Methyl Isobutyl Ketone - 108-10-1	Carcinogen

	Developmental
Toluene - 108-88-3	Developmental
Methanol - 67-56-1	Developmental
Acetaldehyde - 75-07-0	Carcinogen
Crystalline Silica - 14808-60-7	Carcinogen
Ethyl Benzene - 100-41-4	Carcinogen
Naphthalene - 91-20-3	Carcinogen
Cumene - 98-82-8	Carcinogen
Benzene(including benzene from gasoline) - 71-43-2	Carcinogen Developmental Male Reproductive
Lead - 7439-92-1	Carcinogen Developmental Female Reproductive Male Reproductive
Mercury - 7439-97-6	Developmental
Nickel - 7440-02-0	Carcinogen
Cadmium - 7440-43-9	Carcinogen Developmental Male Reproductive

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acetone 67-64-1	X	X	X
Propane 74-98-6	X	X	X
Butyl Acetate 123-86-4	X	X	X
Butane 106-97-8	X	X	X
Methyl N-Propyl Ketone 107-87-9	X	X	X
Dimethyl Carbonate 616-38-6	X	X	X
Carbon Black 1333-86-4	X	X	X
1,2,4-Trimethylbenzene 95-63-6	X	X	X
Methyl Isobutyl Ketone 108-10-1	X	X	X
Cobalt 2-ethylhexanoate 136-52-7	X	-	X
Stoddard Solvent 8052-41-3	X	X	X
Toluene 108-88-3	X	X	X
Methanol 67-56-1	X	X	X
Diethylene Glycol Butyl Ether 112-34-5	X	-	X
Nonane 111-84-2	X	X	X
Propionic Acid 79-09-4	X	X	X
2-Ethylhexanoic acid 149-57-5	X	-	-
Acetaldehyde 75-07-0	X	X	X
Crystalline Silica	X	X	X

14808-60-7			
Ethyl Benzene 100-41-4	X	X	X
Naphthalene 91-20-3	X	X	X
Cumene 98-82-8	X	X	X
Xylene 1330-20-7	X	X	X
Benzene(including benzene from gasoline) 71-43-2	X	X	X
Lead 7439-92-1	X	X	X
Mercury 7439-97-6	X	X	X
Nickel 7440-02-0	X	X	X
Arsenic 7440-38-2	X	X	X
Cadmium 7440-43-9	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

LIST OF HAZARDOUS AIR POLLUTANTS SUBJECT TO THE PROVISIONS OF THE CLEAN AIR ACT, TITLE I SECTION 112 'National Emission Standards for Hazardous Air Pollutants' (present if listed in Section 3):

Chemical name	Weight % of HAPS in Product	Pounds HAPS / Gal Product
Methyl Isobutyl Ketone 108-10-1	0.15	0.01

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitizers		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date	08-Jun-2025
Revision Note	No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

1. Identification

Product identifier **GLOSS WHITE 085002-0**

Other means of identification

Product Code 09549 106506 713

Recommended use Not available.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Quest Industrial Products, LLC.

Address N92 W14701 Anthony Avenue
Menomonee Falls, WI 53051
United States

Telephone Phone (262) 255-9500

Website quest-ip.com

E-mail info@quest-ip.com

Emergency phone number Chemtrec Phone 800-424-9300

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause drowsiness or dizziness. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear eye/face protection.

Response If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If eye irritation persists: Get medical advice/attention.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

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Supplemental information 64.33% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 64.33% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ACETONE		67-64-1	30 to <40
PROPANE		74-98-6	10 to <20
N-BUTANE		106-97-8	5 to <10
PROPYLENE GLYCOL METHYL ETHER ACETATE		108-65-6	5 to <10
2-PENTANONE		107-87-9	1 to <5
N-BUTYL ACETATE		123-86-4	1 to <5
ALIPHATIC SOLVENT MIXTURE		64741-41-9	0.1 to <1
Other components below reportable levels			30 to <40

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact No adverse effects due to skin contact are expected. Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. No specific first aid measures noted.

Ingestion Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.

Most important symptoms/effects, acute and delayed May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

General fire hazards Extremely flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 2 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-PENTANONE (CAS 107-87-9)	PEL	700 mg/m3
		200 ppm
ACETONE (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm
N-BUTYL ACETATE (CAS 123-86-4)	PEL	710 mg/m3
		150 ppm
PROPANE (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-PENTANONE (CAS 107-87-9)	STEL	150 ppm
ACETONE (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
N-BUTANE (CAS 106-97-8)	STEL	1000 ppm
N-BUTYL ACETATE (CAS 123-86-4)	STEL	200 ppm

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US. ACGIH Threshold Limit Values

Components	Type	Value
	TWA	150 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-PENTANONE (CAS 107-87-9)	TWA	530 mg/m3
		150 ppm
ACETONE (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
N-BUTANE (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
N-BUTYL ACETATE (CAS 123-86-4)	STEL	950 mg/m3
		200 ppm
	TWA	710 mg/m3
		150 ppm
PROPANE (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6)	TWA	50 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
ACETONE (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6) — Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

Other

Wear suitable protective clothing.

Respiratory protection

If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Aerosol. Liquefied gas.

Color

Not available.

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Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-305.68 °F (-187.6 °C) estimated
Initial boiling point and boiling range	-43.78 °F (-42.1 °C) estimated
Flash point	-156.0 °F (-104.4 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.9 % estimated
Flammability limit - upper (%)	12.8 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	2979.53 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	550 °F (287.78 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	7.10 lbs/gal
Flammability class	Flammable IA estimated
Heat of combustion (NFPA 30B)	22.98 kJ/g estimated
Percent volatile	69.24
Specific gravity	0.85
VOC	475.724312 g/l Regulatory 3.9701118 lbs/gal Regulatory 2.5337256 lbs/gal Material 303.607286 g/l Material

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Nitrates. Fluorine. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.

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Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity Narcotic effects.

Components	Species	Test Results
2-PENTANONE (CAS 107-87-9)		
Acute		
Oral		
LD50	Rat	3.73 g/kg
ACETONE (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	> 15800 mg/kg
Inhalation		
LC50	Rat	76 mg/l, 4 Hours
Oral		
LD50	Mouse	3000 mg/kg
	Rat	5800 mg/kg
N-BUTANE (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
N-BUTYL ACETATE (CAS 123-86-4)		
Acute		
Inhalation		
LC50	Wistar rat	160 mg/l, 4 Hours
Oral		
LD50	Rat	14000 mg/kg
PROPANE (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	> 1442.847 mg/l, 15 Minutes

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.

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Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
2-PENTANONE (CAS 107-87-9)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	1190 - 1290 mg/l, 96 hours
ACETONE (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
N-BUTYL ACETATE (CAS 123-86-4)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	17 - 19 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
2-PENTANONE	0.91
ACETONE	-0.24
N-BUTANE	2.89
N-BUTYL ACETATE	1.78
PROPANE	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number UN1950

UN proper shipping name Aerosols, flammable, 2.1

Transport hazard class(es)

Class Not available.

Subsidiary risk -

Packing group Not applicable.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable, 2.1
Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Forbidden.
Cargo aircraft only	Forbidden.

IMDG

UN number	UN1950
UN proper shipping name	Aerosols, flammable, 2.1
Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-PENTANONE (CAS 107-87-9)	Listed.
ACETONE (CAS 67-64-1)	Listed.
N-BUTANE (CAS 106-97-8)	Listed.
N-BUTYL ACETATE (CAS 123-86-4)	Listed.
PROPANE (CAS 74-98-6)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

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Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

N-BUTANE (CAS 106-97-8)
PROPANE (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

ACETONE (CAS 67-64-1)	6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

ACETONE (CAS 67-64-1)	35 %WV

DEA Exempt Chemical Mixtures Code Number

ACETONE (CAS 67-64-1)	6532

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

ACETONE (CAS 67-64-1)
ALIPHATIC SOLVENT MIXTURE (CAS 64741-41-9)
N-BUTANE (CAS 106-97-8)

US. Massachusetts RTK - Substance List

2-PENTANONE (CAS 107-87-9)
ACETONE (CAS 67-64-1)
N-BUTANE (CAS 106-97-8)
N-BUTYL ACETATE (CAS 123-86-4)
PROPANE (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

2-PENTANONE (CAS 107-87-9)
ACETONE (CAS 67-64-1)
N-BUTANE (CAS 106-97-8)
N-BUTYL ACETATE (CAS 123-86-4)
PROPANE (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

2-PENTANONE (CAS 107-87-9)
ACETONE (CAS 67-64-1)
N-BUTANE (CAS 106-97-8)
N-BUTYL ACETATE (CAS 123-86-4)
PROPANE (CAS 74-98-6)

US. Rhode Island RTK

ACETONE (CAS 67-64-1)
N-BUTANE (CAS 106-97-8)
N-BUTYL ACETATE (CAS 123-86-4)
PROPANE (CAS 74-98-6)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

1-METHYL-2-PYRROLIDONE (CAS 872-50-4)	Listed: June 15, 2001

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 03-06-2015

Revision date 03-06-2015

Version # 02

HMIS® ratings Health: 2
Flammability: 4
Physical hazard: 0

NFPA ratings Health: 2
Flammability: 4
Instability: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA BELIEVED TO BE RELIABLE AND THE MANUFACTURER DISCLAIMS ANY LIABILITY INCURRED FROM THE USE OR RELIANCE UPON THE SAME. THE INFORMATION GIVEN IS DESIGNED ONLY AS A GUIDANCE FOR SAFE HANDLING, USE, PROCESSING, STORAGE, TRANSPORTATION, DISPOSAL AND RELEASE AND IS NOT TO BE CONSIDERED A WARRANTY OR QUALITY SPECIFICATION. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This safety information is not a license to use this material as claimed by any patents of third parties. The user alone must finally determine whether a contemplated use of this material will infringe any such patents, and for obtaining any required licenses.

SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: GREAT STUFF™ Gaps & Cracks Insulating Foam Sealant 12oz HC ES

Issue Date: 01/06/2016

Print Date: 02/24/2016

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: GREAT STUFF™ Gaps & Cracks Insulating Foam Sealant 12oz HC ES

Recommended use of the chemical and restrictions on use
Identified uses: Polyurethane foam.

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: CHEMTREC +1 703-527-3887
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Flammable aerosols - Category 2
Gases under pressure - Liquefied gas
Acute toxicity - Category 4 - Inhalation
Skin irritation - Category 2
Eye irritation - Category 2B
Respiratory sensitisation - Category 1
Skin sensitisation - Category 1
Effects on or via lactation
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

Label elements
Hazard pictograms

® ™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow



Signal word: **DANGER!**

Hazards
Flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes skin and eye irritation.
May cause an allergic skin reaction.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause harm to breast-fed children.
May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary statements

Prevention
Obtain special instructions before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Avoid contact during pregnancy/ while nursing.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
In case of inadequate ventilation wear respiratory protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

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Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Polyurethane prepolymer
This product is a mixture.

Component	CASRN	Concentration
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 10.0 - <= 30.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 10.0 - <= 30.0 %
Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer	57029-46-6	>= 10.0 - <= 30.0 %
Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer	53862-89-8	>= 10.0 - <= 30.0 %
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 5.0 - <= 10.0 %
Paraffin waxes and Hydrocarbon waxes, chlorinated	63449-39-8	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 7.0 - <= 13.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %

Note
Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

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Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Hydrogen cyanide.

Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Vapors are

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heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Confined space entry procedures must be followed before entering the area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Ground and bond all containers and handling equipment. Isolate area until gas has dispersed. Use non-sparking tools in cleanup operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Collect in suitable and properly labeled containers. Absorb with materials such as: Clay. Dirt. Milsorb®. Sand. Sawdust. Vermiculite. See Section 10 for more specific information. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Never use air pressure for transferring product. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Keep out of reach of children. Vapors are heavier than air and may travel a long distance

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and accumulate in low lying areas. Ignition and/or flash back may occur. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Store in a dry place. See Section 10 for more specific information.

Storage stability

Storage temperature:	**Storage Period:**
25 °C (77 °F)	12 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
4,4' -Methylenediphenyl diisocyanate	Dow IHG	TWA	0.005 ppm
	Dow IHG	STEL	0.02 ppm
	ACGIH	TWA	0.005 ppm
	OSHA Z-1	C	0.2 mg/m3 0.02 ppm
	NIOSH REL	TWA	0.05 mg/m3 0.005 ppm
	NIOSH REL	C	0.2 mg/m3 0.02 ppm
Isobutane	ACGIH	STEL	1,000 ppm
Methyl ether	US WEEL	TWA	1,000 ppm
Propane	ACGIH		Asphyxiant
	OSHA Z-1	TWA	1,800 mg/m3 1,000 ppm

This material contains a simple asphyxiant which may displace oxygen. Insure adequate ventilation to prevent an oxygen deficient atmosphere.
The minimum requirement of 19.5% oxygen at sea level (148 torr O2, dry air) provides an adequate amount of oxygen for most work assignments.

Exposure controls

Engineering controls: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove

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barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Foam
Color	Yellow
Odor	Mild
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	Not applicable
Flash point	**closed cup** -104 °C (-155 °F) *Closed Cup*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	No data available
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	1,151 hPa at 55 °C (131 °F) *Not reported* Container is under pressure.
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.06 *Estimated.*
Water solubility	Insoluble
Partition coefficient: n-octanol/water	No data available

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Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	No
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7. Unstable at elevated temperatures.

Possibility of hazardous reactions: Can occur. Exposure to elevated temperatures can cause product to decompose and generate gas. This can cause pressure build-up and/or rupturing of closed containers. Acids.

Conditions to avoid: Avoid temperatures above 50 °C
Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose.

Incompatible materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Strong oxidizers. Products based on diisocyanates like TDI and MDI react with many materials to release heat. The reaction rate increases with temperature as well as with increased contact; these reactions can become violent. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation.

As product: Single dose oral LD50 has not been determined.

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LD50, Rat, > 2,000 mg/kg Estimated.

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity
In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. May cause central nervous system depression. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Decreased lung function has been associated with overexposure to isocyanates.
As product: The LC50 has not been determined.

Skin corrosion/irritation
Prolonged contact may cause moderate skin irritation with local redness.
Material may stick to skin causing irritation upon removal.
May stain skin.

Serious eye damage/eye irritation
May cause moderate eye irritation.
May cause slight temporary corneal injury.

Sensitization
Skin contact may cause an allergic skin reaction.
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

May cause allergic respiratory reaction.
MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.
Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause respiratory irritation.
Route of Exposure: Inhalation

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

Carcinogenicity
Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory

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irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Teratogenicity
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

Reproductive toxicity
Based on information for component(s): May cause harm to breastfed babies.

Mutagenicity
In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Diphenylmethane Diisocyanate, isomers and homologues

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, 0.49 mg/l

For similar material(s): 2,4'-Diphenylmethane diisocyanate (CAS 5873-54-1). LC50, Rat, 4 Hour, Aerosol, 0.31 mg/l

For similar material(s): 4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8). LC50, Rat, 1 Hour, Aerosol, 2.24 mg/l

4,4' -Methylenediphenyl diisocyanate

Acute inhalation toxicity
LC50, Rat, 1 Hour, dust/mist, 2.24 mg/l

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Acute inhalation toxicity
The LC50 has not been determined.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Acute inhalation toxicity
The LC50 has not been determined.

Tris(1-chloro-2-propyl) phosphate

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 7 mg/l

Paraffin waxes and Hydrocarbon waxes, chlorinated

Acute inhalation toxicity
The LC50 has not been determined.

Isobutane

Acute inhalation toxicity
LC50, Mouse, 1 Hour, 52 mg/l

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Methyl ether

Acute inhalation toxicity
LC50, Rat, 4 Hour, gas, 164000 ppm

Propane

Acute inhalation toxicity
LC50, Rat, male and female, 4 Hour, vapour, > 425000 ppm

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Diphenylmethane Diisocyanate, isomers and homologues

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

4,4' -Methylenediphenyl diisocyanate

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.

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Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Acute toxicity to fish
For this family of materials:
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Tris(1-chloro-2-propyl) phosphate

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 84 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 48 Hour, 131 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth rate inhibition, 82 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

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EC50, activated sludge, Respiration inhibition, 3 Hour, 784 mg/l, OECD 209 Test

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 32 mg/l
LOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, > 32 mg/l

Paraffin waxes and Hydrocarbon waxes, chlorinated

Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 0.1 mg/l

Isobutane

Acute toxicity to fish
No relevant data found.

Methyl ether

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Poecilia reticulata (guppy), semi-static test, 96 Hour, > 4,000 mg/l

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, > 4,000 mg/l, OECD Test Guideline 202 or Equivalent

Propane

Acute toxicity to fish
No relevant data found.

Persistence and degradability

Diphenylmethane Diisocyanate, isomers and homologues

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

4,4' -Methylenediphenyl diisocyanate

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

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Biodegradability: For this family of materials: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Biodegradability: Expected to degrade slowly in the environment.

Tris(1-chloro-2-propyl) phosphate

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 14 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
10-day Window: Not applicable
Biodegradation: 95 %
Exposure time: 64 d
Method: OECD Test Guideline 302A or Equivalent

Theoretical Oxygen Demand: 1.17 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 0.24 d
Method: Estimated.

Paraffin waxes and Hydrocarbon waxes, chlorinated

Biodegradability: Expected to degrade slowly in the environment.

Theoretical Oxygen Demand: 2.89 mg/mg

Isobutane

Biodegradability: Biodegradation may occur under aerobic conditions (in the presence of oxygen).

Theoretical Oxygen Demand: 3.58 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 4.4 d
Method: Estimated.

Methyl ether

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301A or Equivalent

Theoretical Oxygen Demand: 2.08 mg/mg

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Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 6.4 d
Method: Estimated.

Propane

Biodegradability: No relevant data found.

Theoretical Oxygen Demand: 3.64 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 8.4 d
Method: Estimated.

Bioaccumulative potential

Diphenylmethane Diisocyanate, isomers and homologues

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

4,4' -Methylenediphenyl diisocyanate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Bioaccumulation: No relevant data found.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Bioaccumulation: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Tris(1-chloro-2-propyl) phosphate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.59 Measured
Bioconcentration factor (BCF): 0.8 - 4.6 Cyprinus carpio (Carp) 42 d Measured

Paraffin waxes and Hydrocarbon waxes, chlorinated

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient: n-octanol/water(log Pow): 7.4 Estimated.

Isobutane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.76 Measured

Methyl ether

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Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.10 Measured

Propane
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.36 Measured

Mobility in soil

Diphenylmethane Diisocyanate, isomers and homologues
In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

4,4' -Methylenediphenyl diisocyanate
In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer
No relevant data found.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer
In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Tris(1-chloro-2-propyl) phosphate
Potential for mobility in soil is slight (Koc between 2000 and 5000).
Partition coefficient(Koc): 1300 Estimated.

Paraffin waxes and Hydrocarbon waxes, chlorinated
Expected to be relatively immobile in soil (Koc > 5000).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient(Koc): > 5000 Estimated.

Isobutane
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 35 Estimated.

Methyl ether
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 1.29 - 14 Estimated.

Propane
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 24 - 460 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and

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compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Aerosols
UN number	UN 1950
Class	2.1
Packing group	
Reportable Quantity	MDI

Classification for SEA transport (IMO-IMDG):

Proper shipping name	AEROSOLS
UN number	UN 1950
Class	2.1
Packing group	
Marine pollutant	Paraffin waxes and Hydrocarbon waxes, chlorinated
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Aerosols, flammable
UN number	UN 1950
Class	2.1
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard
Chronic Health Hazard
Fire Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components	**CASRN**
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9
4,4' -Methylenediphenyl diisocyanate	101-68-8

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	**CASRN**
Isobutane	75-28-5
Methyl ether	115-10-6
Propane	74-98-6

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Revision
Identification Number: 101265380 / A001 / Issue Date: 01/06/2016 / Version: 8.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Asphyxiant	Asphyxiant
C	Ceiling

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Dow IHG	Dow Industrial Hygiene Guideline
NIOSH REL	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short term exposure limit
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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SAFETY DATA SHEET
LOW PRESSURE POLYURETHANE FOAM
A-SIDE COMPONENT (134a)

SECTION 1- IDENTIFICATION

1.1 Product Identifier

Product Name: Handi-Foam® E84 Class 1, Handi-Foam® Quick Cure, Handi-Foam® SPF Roof Patch, Handi-Foam® Commercial Vehicle, Handi-Foam® Sound Barrier, Handi-Foam® Air Seal, Handi-Foam® Low Density, Hand-Foam® Slow Rise, Silent Seal® SA, and Handi-Foam® Black.

ID SDS: **A16178A**
REACH Registration:

1.2 Relevant identified uses of the substance or mixture and uses advised against:

General Use: Low pressure polyurethane foam, Side-A Component, for PROFESSIONAL USE ONLY
Uses advised against: No further information available

1.3 Details of the supplier and of the safety data sheet:

Manufacturer: ICP Adhesives & Sealants
2775 Barber Road
Norton, Ohio 44203
In Ohio: 330-753-4585; 1-800-321-5585 (Monday-Friday, 8:00 am – 5:00pm EST)

1.4 Emergency telephone numbers:

In the U.S.A: CHEMTEL (24 hours) 1-800-255-3924
International: CHEMTEL (24 hours) 1-813-248-0585

SECTION 2- HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture
Classification:
Gases Under Pressure- Compressed Gas
Skin Irritation- Category 2
Skin Sensitization- Category 1
Eye Irritation- Category 2A
Acute Toxicity Inhalation- Category 4
Respiratory Sensitizing- Category 1
Specific Target Organ Toxicity, Single Exposure -Category 3 (STOT SE 3)
Specific Target Organ Toxicity, Repeated Exposure- Category 2 (STOT RE 2)

2.2 Label elements

Hazard Symbols:



Signal Word: WARNING

Hazard Statements:

H280 Contains gas under pressure; may explode if heated
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H332 Harmful if inhaled
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 May cause respiratory irritation
H373 May cause damage to organs (respiratory tract) through prolonged or repeated exposure

Prevention:

P202 Do not handle until all safety precautions have been read and understood
P251 Pressurized container: Do not pierce or burn, even after use
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P262 Do not get in eyes, on skin, or on clothing
P264 Wash hands and other skin areas exposed to material thoroughly after handling
P271 Use outdoors or in a well-ventilated area
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear protective gloves, protective clothing and eye protection
P284 Wear respiratory protection

Response:

P302+P352+P333+P313 IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention
P304+P341 IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable

		for breathing
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308+P313	IF exposed or concerned: Get medical advice.
	P314	Get medical attention if you feel unwell
	P337+P313	If eye irritation persists: Get medical attention
	P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
	P362	Take off contaminated clothing and wash before reuse.
Storage:	P405	Store locked up
	P410+P403	Protect from sunlight. Store in a well-ventilated place.
Disposal:	P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
Other hazards:		There are no other hazards otherwise classified that have been identified.

SECTION 3-COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical characterization (preparation):

% by Weight	Ingredient	CAS No.	EC Number
30-60	4,4' Diphenylmethane diisocyanate	101-68-8	202-966-0
30-60	Polymethylene polyphenyl isocyanate	9016-87-9	500-079-6
<10	Nitrogen	7727-37-9	231-783-9
5-10	1,1,1,2- Tetrafluoroethane	811-97-2	212-377-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

SECTION 4- FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product vapors causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen. If respiratory arrest occurs, start artificial respiration by a trained individual. Loosen tight fitting clothing such as a jacket or tie. Seek medical attention immediately. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening. Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do, remove contact lenses. If irritation persists, get medical attention.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Gently wipe product from skin with a damp cloth and continue rinsing for 15 minutes. Wash clothing before reuse. Call a physician if irritation persists.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible). Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high propellant concentrations (enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe victim for the development of cardiac arrhythmias.

SECTION 5- FIRE FIGHTING MEASURES

5.1 Extinguishable media

Suitable methods of extinction: Use dry chemical, carbon dioxide, alcohol resistant foams and water spray

Unsuitable methods of extinction: None

5.2 Special hazards arising from the substance or mixture

Cans, cylinders, or refillable cylinders may explode due to the buildup of pressure when exposed to extreme heat. During a fire, isocyanate vapors or other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Hazardous decomposition products may include and are not limited to: Nitrogen oxides, Hydrogen cyanide, Carbon monoxide, and Carbon dioxide.

5.3 Advice for firefighters
Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

SECTION 6- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ventilate the area.

6.2 Environmental precautions
Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and materials for containment and cleaning up
Cover drains and contain spill. Cover spilled material with a large quantity of inert absorbent. Collect material and place into an approved, open-head metal container. Decontaminate the spill and waste area with a neutralization solution. Wait 15 minutes. Repeat applications of decontamination solution, with scrubbing, followed by absorbent until the surface is decontaminated. Allow container to vent for 72 hours to let carbon dioxide escape. Dispose of waste via a licensed waste disposal contractor in accordance with all applicable federal, state, provincial and local regulations. Ensure adequate ventilation.

Additional spill procedures- neutralization solutions (decontamination):

Use ten parts of solution for each part of the spill.

(1) An aqueous solution containing 3-8% ammonium hydroxide or concentrated ammonia and 0.2-0.5% liquid detergent
(2) An aqueous solution containing 5-10% sodium bicarbonate and 0.2-0.5% liquid detergent

6.4 Reference to other sections
For indications about waste treatment & disposal, see Section 13
See Section 7 for information about safe handling

SECTION 7- HANDLING AND STORAGE

7.1 Precautions for safe handling
For Industrial or professional use only. Observe label precautions, do not use until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray during application. Use adequate ventilation to keep airborne isocyanate levels below exposure limits. Recommend wearing respiratory protection when spraying this material. Warning symptoms (irritation of the eyes, nose, or throat, or odor) are not adequate to prevent overexposure from inhalation. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed. Avoid contact with skin or eyes. Wear appropriate personal protective equipment during use (see Section 8). Wash thoroughly after handing product. Do not puncture or incinerate cylinders. Cylinders are under pressure. Keep cylinder valves closed when not in use.

Advice on protection against fire and explosion
Contents under pressure. Exposure to high temperatures can cause cylinders to rupture or explode.

7.2 Conditions for safe storage, including any incompatibilities
Store in a dry, well-ventilated area and away from incompatible materials (see Section 10.5). Storage temperature is 60-90°F (16-32°C). Products stored below 60°F (16°C) or above 90°F (32°C) must be given adequate time to warm up/cool down. Do not expose the cylinders /kits to open flame or temperatures above 122°F (50°C); storage at elevated temperatures can cause the container to rupture. Excessive heat can cause premature aging of components resulting in a shorter shelf life. Protect unused product from freezing. Storage below 60°F (16°C) may affect foam quality if chemicals are not warmed to room temperature before using. Protect cylinders from physical abuse. Always store the cylinders in the upright position. **KEEP OUT OF REACH OF CHILDREN.**

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

Ingredient	CAS Number	OSHA-PEL	ACGIH-TLV	Other
4,4' Diphenylmethane diisocyanate	101-68-8	0.2 mg/m^3 ; 0.02 ppm CEIL	0.051 mg/m^3 ; 0.005 ppm (8 hours TWA)	**NIOSH**- 0.2 mg/m^3 ; 0.02 ppm CEIL 0.051 mg/m^3 ; 0.005 ppm TWA **EL (Canada)** Long Term Value 0.005 ppm; Ceiling limit value 0.01 ppm; Skin: S **EV (Canada)** Long Term Value 0.005 ppm; Ceiling limit value 0.02 ppm
1,1,1,2 Tetrafluoroethane	811-97-2			WEEL 1,000 ppm

8.2 Exposure controls:
Engineering Controls: Use local and general exhaust ventilation to control levels of exposure.
Eye/face Protection: Wear protective goggles or safety glasses with side shields.

Hand Protection: Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should take into account potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.
Other Protective Equipment: Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.
Respiratory Protection: Atmospheric levels should be maintained below the exposure guidelines. Use products only in a well-ventilated area. Engineering and administrative (work practices) controls should be implemented to protect the workers. If atmospheric levels are expected to exceed the exposure levels, use a NIOSH approved air purifying respirator equipped with an organic vapor cartridge and a particulate filter. If atmospheric levels exceed 10 times the TLV or PEL level for which an air-purifying respirator is effective, use a powered air purifying respirator (PAPR). The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The odor and irritancy of this material is inadequate to warn of excessive exposure.
Hygiene Measures: An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.
Medical Surveillance: All employees/end-users who work with isocyanates should undergo a medical evaluation. A history of eczema or respiratory allergies are possible reasons for medical exclusion from working with isocyanates. Users with a prior history of isocyanate sensitization should be excluded from further work with isocyanates. Once a user is diagnosed with being sensitized to isocyanates, no further exposure should be permitted.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
General Physical Form	Amber to dark brown liquid. Forms an off-white to yellowish froth when released from the container
Odor	Slightly musty
Odor Threshold	No data available
pH	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Range	MDI boils at 406°F (208°C)
Flash Point	MDI 390°F (>199°C)
Evaporation Rate	No data available
Flammability	No applicable
Lower Flammability/Explosive Limit	Not available
Upper Flammability/Explosive Limit	Not available
Vapor Pressure in Container	Contents under pressure have a vapor pressure >50 psi (>345kPa)
Vapor Pressure of Liquid	Liquid phase vapor pressure: <1 mm Hg @ 40°C
Vapor Density	No data available
Relative Density/Specific Gravity	~ 1.2 @ 25°C (Water = 1)
Solubility	Insoluble; reacts slowly with water during cure, liberating traces of CO_2
Partition coefficient: n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Oxidizing Properties	Not available
VOC Content (calculated minus exempt compounds)	0 g/L (minus exempted compounds)

SECTION 10- STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
Stable under normal conditions of use and recommended storage conditions. See Section 7 for storage recommendations.
10.3 Possibility of hazardous reactions
Exposure to elevated temperatures can cause containers to rupture or explode. Avoid moisture, material reacts slowly with water releasing carbon dioxide. Contents are under pressure.
10.4 Conditions to avoid
Temperatures below 60°F (16°C) or temperatures above 90°F (32°C). Avoid heat and flames.
10.5 Incompatible materials
Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers. Avoid contamination with water.
10.6 Hazardous decomposition products
See Section 5.2 for hazardous decomposition products related to combustion.

SECTION 11- TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Signs and Symptoms of Exposure based on test data and/or information on the components, this material may produce the following health effects:

Inhalation: Isocyanates vapors at concentrations above the concentration limits or guidelines can irritate the mucous membranes in the respiratory tract with symptoms of burning sensation, runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (difficulty breathing). Persons with a pre-existing, nonspecific bronchial hyperactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in the lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible; however, increased lung sensitivity may persist for a longer period of time. May be harmful if inhaled. Inhalation of the propellant may cause lightheadedness, headache and lethargy.

Eye Contact: May cause eye irritation. Symptoms may include redness, swelling, stinging, and tearing. May cause temporary corneal injury. Product vapor may cause eye irritation with symptoms of burning and tearing.

Skin Contact: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause an allergic reaction. Can cause sensitization. Persons previously sensitized can experience allergic skin reactions. May be harmful if absorbed through the skin.

Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation: stomach distress, nausea, or vomiting.

Acute oral toxicity
Expected to have low acute oral toxicity. 4,4'- Diphenylmethane diisocyanate: LD50, rat: >5000 mg/kg
Acute inhalation toxicity
At room temperature, vapors are minimal. See above for possible exposures. 4,4'- Diphenylmethane diisocyanate: LC50, rat: 490 mg/m^3, 4h
Acute dermal toxicity
Expected to have a low acute dermal toxicity. 4,4'- Diphenylmethane diisocyanate: LD50, rabbit: >5000 mg/kg
Skin irritation
Causes skin irritation
Eye irritation
Causes moderate to serious eye irritation
Sensitization
May cause skin and respiratory sensitization
Genotoxicity
Genetic toxicity data for MDI is inconclusive. Some in-vitro studies yield positive results, while other test data were negative
Mutagenicity
Test data using laboratory animals was predominately negative
Specific organ toxicity- single exposure
May cause respiratory irritation
Specific organ toxicity- repeated exposure
May cause damage to the lungs, central nervous system and skin
Aspiration hazard
No data available

11.2 Further information

MDI and PMDI: IARC Group 3 carcinogen- Not classifiable as to its carcinogenicity to humans. Not listed as a carcinogen by ACGIH, OSHA or NTP. MDI/PMDI did not cause birth defects in laboratory animals; fetal effects occurred only at high doses which were toxic to the mother. Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/PMDI (6mg/m^3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects.

SECTION 12- ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Ecotoxicological data reported are for a comparable product. The Ecotoxicity is that of the hydrolyzed product generally under conditions of maximizing production of soluble species. This material is not classified as dangerous to aquatic organisms (LD50/EC50 greater than 100 mg/l in the most sensitive species).

Acute and prolonged toxicity to fish: LC50- Brachydanio rerio (Zebra fish), 96h >1000 mg/l
Toxicity to aquatic invertebrates: EC50- Daphnia magna (Water flea) 48h >1000 mg/l
Toxicity to aquatic plants: NOEC- Desmodesmus subspicatus (Green algae) static, 72 h >1640 mg/l, growth rate inhibition
Toxicity to aquatic microbes: OECD 209 Test- Activated Sludge 3 h >100 mg/l, respiration inhibition
Toxicity to soil dwelling organisms: EC50- Eisenia fetida (earthworms) 14 d >1000 mg/kg
12.2 Persistence and degradability

Product is not readily biodegradable. In aquatic and terrestrial environments, this material reacts with water, forming predominantly insoluble and stable polyureas. In the atmospheric environment, this material is expected to have a short tropospheric half-life, based on data from similar diisocyanates.

12.3 Bioaccumulation potential

Bioaccumulation potential is low.

12.4 Mobility

Expected to have low mobility based on product's reactivity with water, which forms predominately insoluble polyureas.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Additional ecological information: Do not allow material to run into surface waters, wastewater, or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

SECTION 13- DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Always wear proper protective equipment as you would while spraying the two-component foam in a well-ventilated area.

Procedure for handling empty or partially used disposable cylinders (not returnable):

1. DO NOT INCINERATE CYLINDERS.
2. Empty cylinders by dispensing the foam into a waste container like a cardboard box or plastic bag. Depressurize the used cylinders using the dispensing unit with a new nozzle attached. Spray the foam until one of the components/cylinders no longer sprays chemical.
3. Remove the nozzle and then continue to depressurize by dispensing the remaining chemical(s) into a waste container (a box lined with a plastic bag) that has adequate industrial liquid absorbing medium in the bottom. Dispense the residual chemicals until the pressure is down to a minimum or there are just large bubbles in the hose.
4. Close the cylinder valves completely, and then operate the dispensing unit again to empty and depressurize the hoses. Use a 9/16" wrench and remove the hoses from the cylinders. Use caution in case there is some residual chemical and/or pressure in the hoses.
5. Invert the cylinder and point away from face. Slowly open the cylinder over the waste container to catch any residual spray.
6. Return the cylinder to an upright position. Shake the container; there should not be any sloshing of liquid. Make sure to leave valves OPEN-do not close. DO NOT PUNCTURE.
7. The user of this material has the responsibility to dispose of empty cylinders, unused material and residues in compliance to all applicable federal, state, international and local regulations regarding the treatment, storage, and disposal for hazardous and nonhazardous wastes. Check with your local waste disposal service for guidance.

NOTE: After dispensing if one cylinder has chemical left in it, treat as hazardous material.

Procedure for handling empty refillable cylinders:

THESE CYLINDERS ARE RETURNABLE. These cylinders (refillable cylinders) are shipped back to ICP Adhesives & Sealants, Inc. to be cleaned, refilled, and redistributed. Return instructions are included in or on the A-cylinder collar.

SECTION 14- TRANSPORTATION

Note: Transportation information is for reference only. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

	Containers Less Than 1000 cu. cm. (1 liter)	Containers Greater Than 1000 cu. cm. (1 liter)
Ground	Consumer Commodity ORM-D	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label)
Air	UN1950 Aerosols, Non-Flammable 2.2 (Non-flammable Gas Label) LIMITED QUANTITY Packing Instructions (Cargo & Passenger) 203	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label) Packing Instructions (Cargo & Passenger) 218
Water	UN1950 Aerosols, Non-Flammable 2.2 (Non-flammable Gas Label) LIMITED QUANTITY	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label)

SECTION 15- REGULATORY

15.1 Safety, health, and environmental regulations/legislations specific for the substance or mixture

U.S. Federal Regulations:

OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200

TSCA Status: All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory. This product is not subject to TSCA 12(b) Export Notification.
Superfund Amendments and Reauthorization Act (SARA)
SARA Section 311/312 Hazard Categories: Acute Health Hazard, Chronic Health Hazard, Sudden Release of Pressure Hazard
SARA 313 Information: MDI and PMDI are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.
SARA 302/304 Extremely Hazardous Substance: No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.
SARA 302/304 Emergency Planning & Notification: No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.
Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substances: 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8), RQ- 2,268 kg (5,000 lbs).
Clean Air Act (CAA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.
Clean Water Act (CWA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

U.S. State Regulations:
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: None of the ingredients are listed.
Other U.S. State Inventories:
4, 4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: CA, DE, ID, IL, ME, MA, MN, NJ, PA, WA, WI
Polymeric MDI (CAS #9016-87-9) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, NJ, MN
1,1,1,2- Tetrafluoroethane (CAS #811-97-2) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: ME, WI
Canada Controlled Product Regulations (CPR): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation, and the SDS contains all the information required by the Controlled Products Regulations.

Canadian Ingredient Disclosure List (IDL): 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the IDL.

Canadian National Pollutant Release Inventory (NPRI): MDI and PMDI are listed on the NPRI

WGK, Germany (Water danger/protection): 1

Global Chemical Inventory Lists:
United States: Toxic Substance Control Act (TSCA)- Yes
Canada: Domestic Substances List (DSL)- Yes
Canada: Non-Domestic Substances List (NDSL)- No
Europe: Inventory of New and Existing Chemicals- (EINECS)- Yes
Australia: Australian Inventory of Chemical Substances (AICS)- Yes
New Zealand: New Zealand Inventory of Chemicals (NZLoC)- Yes
China: Inventory of Existing Chemical Substances in China (IECSC)- Yes
Japan: Inventory of Existing and New Chemical Substances (ENCS)- Yes
Korea: Existing Chemicals List (ECL)- Yes
Philippines: Philippines Inventory of Chemicals and Chemical Substances (PICCS)- Yes

15.2 Chemical safety assessment: For this product a chemical safety assessment was not carried out

SECTION 16- OTHER



NFPA: Health Hazard 2; Flammability 1; Reactivity 1
HMIS: Health Hazard 2; Flammability 1; Physical Hazard 1
Hazard Rating: 0=minimal, 1= slight, 2=moderate, 3=severe, 4= extreme

Abbreviations and acronyms:
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health
Gases Under Pressure- Compressed Gas
Skin Irritation- Category 2
Skin Sensitization- Category 1
Eye Irritation- Category 2B
Acute Toxicity Inhalation- Category 4
Respiratory Sensitizing- Category 1
Specific Target Organ Toxicity, Single Exposure -Category 3 (STOT SE 3)
Specific Target Organ Toxicity, Repeated Exposure- Category 2 (STOT RE 2)- Inhalation
SPF- Spray Polyurethane Foam

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. ICP Adhesives & Sealants reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

Revision- February 12, 2018 (Date of Preparation) Version 3.3
Replaces Version 3.2 August 11, 2017

SAFETY DATA SHEET
LOW PRESSURE POLYURETHANE FOAM
B-SIDE COMPONENT (134a)

SECTION 1- IDENTIFICATION

1.1 Product Identifier

Product Name: Handi-Foam® E84 Class 1, Handi-Foam® Quick Cure, Handi-Foam® SPF Roof Patch, Handi-Foam® Air Seal, Hand-Flow® Slow Rise, Handi-Foam® Black and Silent Seal® SA.

ID SDS: **A16178B**
REACH Registration:

1.2 Relevant identified uses of the substance or mixture and uses advised against:

General Use: Low pressure polyurethane foam, Side-B Component, for PROFESSIONAL USE ONLY
Uses advised against: No further information available

1.3 Details of the supplier and of the safety data sheet:

Manufacturer: ICP Adhesives & Sealants
2775 Barber Road
Norton, Ohio 44203
In Ohio: 330-753-4585; 1-800-321-5585 (Monday-Friday, 8:00 am – 5:00pm EST)

1.4 Emergency telephone numbers:

In the U.S.A: CHEMTEL (24 hours) 1-800-255-3924
International: CHEMTEL (24 hours) 1-813-248-0585

SECTION 2- HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture
Classification: Gases Under Pressure- Compressed Gas
Skin Irritation- Category 2
Eye Irritation- Category 2A

2.2 Label elements

Hazard Symbols:



Signal Word: WARNING

Hazard Statements:

H280 Contains gas under pressure; may explode if heated
H315 Causes skin irritation
H319 Causes serious eye irritation

Prevention:

P202 Do not handle until all safety precautions have been read and understood
P251 Pressurized container: Do not pierce or burn, even after use.
P264 Wash hands and other skin areas exposed to material thoroughly after handling
P271 Use outdoors or in a well-ventilated area
P280 Wear protective gloves, protective clothing and eye protection
P285 In case of inadequate ventilation: wear respiratory protection

Response:

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment: Seek immediate medical advice. Refer to product label and Section 4 of this SDS
P333+P313 If skin irritation or rash occurs: Get medical attention
P337+P313 If eye irritation persists: Get medical attention
P362 Take off contaminated clothing and wash before reuse.

Storage:

P405 Store locked up
P410+P403 Protect from sunlight. Store in a well-ventilated place.

Disposal: P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

Other hazards: There are no other hazards otherwise classified that have been identified

SECTION 3-COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical characterization (preparation):

% by Weight	Ingredient	CAS No.	EC Number
15-45	Tris (1-chloro-2-propyl) Phosphate	13674-84-5	237-158-7
10-30	1,1,1,2- Tetrafluoroethane	811-97-2	212-377-0
<10	Nitrogen	7727-37-9	231-783-9
1-5	Pentamethyldiethylenetriamine	3030-47-5	221-201-1
0.5 – 1.5	Diethylene Glycol	111-46-6	203-872-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

SECTION 4- FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product vapors causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen. If respiratory arrest occurs, start artificial respiration by a trained individual. Loosen tight fitting clothing such as a jacket or tie. Seek medical attention immediately.

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do, remove contact lenses. If irritation persists, get medical attention.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Gently wipe product from skin with a damp cloth and continue rinsing for 15 minutes. Wash clothing before reuse. Call a physician if irritation persists.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible). Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high propellant concentrations (enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe victim for the development of cardiac arrhythmias.

SECTION 5- FIRE FIGHTING MEASURES

5.1 Extinguishable media

Suitable methods of extinction: Use dry chemical, carbon dioxide, alcohol resistant foams and water spray

Unsuitable methods of extinction: None

5.2 Special hazards arising from the substance or mixture

Cans, cylinders, or refillable cylinders may explode due to the buildup of pressure when exposed to extreme heat. Highly toxic gases may be generated by thermal decomposition or combustion. Overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Hazardous decomposition products may include and are not limited to: Carbon monoxide, Carbon dioxide, Aldehydes, Oxides of Nitrogen.

5.3 Advice for firefighters

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

SECTION 6- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ventilate the area.

6.2 Environmental precautions

Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Cover spilled material with a large quantity of inert absorbent. Collect material and place into an approved, open-head metal container. Clean contaminated area with soap and water.

6.4 Reference to other sections

For indications about waste treatment and disposal, see Section 13

See Section 7 for information about safe handling

SECTION 7- HANDLING AND STORAGE

7.1 Precautions for safe handling

For Industrial or professional use only. Observe label precautions, do not use until all safety precautions have been read and understood. Wear all appropriate protective equipment specified in Section 8. Keep cylinders/valves closed when not in use. Recommend using in a well-ventilated area with respiratory protection. Avoid contact with eyes and skin. Keep out of reach of children.

Advice on protection against fire and explosion

Contents under pressure. Exposure to high temperatures can cause cylinders to rupture or explode.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, well-ventilated area and away from incompatible materials (see Section 10.5). Storage temperature is 60-90°F (16-32°C). Products stored below 60°F (16°C) or above 90°F (32°C) must be given adequate time to warm up/cool down. Do not expose the cylinders/kits to open flame or temperatures above 122°F (50°C); storage at elevated temperatures can cause the cylinder to rupture. Excessive heat can cause premature aging of components resulting in a shorter shelf life. Protect unused product from freezing. Storage below 60°F (16°C) may affect foam quality if chemicals are not warmed to room temperature before using. Protect cylinders from physical abuse. Always store the containers in the upright position. **KEEP OUT OF REACH OF CHILDREN.**

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

Ingredient	CAS Number	OSHA-PEL	ACGIH-TLV	Other
Diethylene Glycol	111-46-6			WEEL 10 mg/kg
1,1,1,2 Tetrafluoroethane	811-97-2			WEEL 1,000 ppm

8.2 Exposure controls:

Engineering Controls: Use local and general exhaust ventilation to control levels of exposure.

Eye/face Protection: Wear protective goggles or safety glasses with side shields.

Hand Protection: Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should take into account potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.

Other Protective Equipment: Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guidelines. Use products only in a well-ventilated area. Engineering and administrative (work practices) controls should be implemented to protect the workers. If atmospheric levels are expected to exceed the exposure levels, use a NIOSH approved air purifying respirator equipped with an organic vapor cartridge and a particulate filter. If atmospheric levels exceed 10 times the TLV or PEL level for which an air-purifying respirator is effective, use a powered air purifying respirator (PAPR). The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The odor and irritancy of this material is inadequate to warn of excessive exposure.

Hygiene Measures: An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
General Physical Form	Amber to dark brown liquid. Forms an off-white to yellowish froth when released from the container
Odor	Slight fluorocarbon and amine odor
Odor Threshold	No data available
pH	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Range	Propellant -26°C (-15°F); >93°C (200°F), liquid phase
Flash Point	Estimated >392°F (>200°C).
Evaporation Rate	No data available
Flammability	No applicable
Lower Flammability/Explosive Limit	Not available
Upper Flammability/Explosive Limit	Not available
Vapor Pressure in Container	Contents under pressure have a vapor pressure >50 psi (>345kPa)
Vapor Pressure of Liquid	Liquid phase vapor pressure: <1 mm Hg @ 40°C
Vapor Density	No data available
Relative Density/Specific Gravity	~ 1.2 @ 25°C (Water = 1)

Solubility	Water: partly soluble, does not react
Partition coefficient: n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Oxidizing Properties	Not available
VOC Content (calculated minus exempt compounds)	Calculated 11.4 g/L

SECTION 10- STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability
Stable under normal conditions of use and recommended storage conditions. See Section 7 for storage recommendations.

10.3 Possibility of hazardous reactions
Exposure to elevated temperatures can cause containers to rupture or explode. Contents are under pressure.

10.4 Conditions to avoid
Temperatures below 60°F (16°C) or temperatures above 90°F (32°C). Avoid heat and flames.

10.5 Incompatible materials
Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers.

10.6 Hazardous decomposition products
See Section 5.2 for hazardous decomposition products due to combustion.

SECTION 11- TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Signs and Symptoms of Exposure based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Mist or vapor may cause irritation of the nose, throat and respiratory tract. Symptoms may include sore throat, coughing, headache, nausea and shortness of breath. Inhalation of propellant may cause lightheadedness, headache and lethargy.
Skin Contact:
May cause mild skin irritation. Symptoms may include localized redness and discomfort.
Eye Contact:
May cause serious eye irritation. Symptoms may include redness, swelling, stinging, and tearing. May cause temporary corneal injury. Product vapor may cause eye irritation with symptoms of burning and tearing.
Ingestion:
May cause gastrointestinal irritation: stomach distress, nausea, or vomiting. Repeated ingestion may be harmful.

Acute toxicity:
LD/LC50 Values that are relevant for classification: None
Primary irritant effect:
On the skin: Irritant to skin and mucous membranes.
On the eye: Irritating effect
Sensitization: Based on available data, the classification criteria are not met
IARC (International Agency for Research on Cancer): None of the ingredients are listed.
NTP (National Toxicology Program): None of the ingredients are listed
OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients are listed
Probable routes of exposure: Inhalation, eye contact and skin contact.
Acute effects (acute toxicity, irritation and corrosivity): Irritating to eyes and skin.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity: Based on available data, the classification criteria are not met
Specific organ toxicity- single exposure
No data available
Specific organ toxicity- repeated exposure
No data available
Aspiration hazard
No data available
Other: This product has not been tested. The above information has been derived from the properties of the individual components.

SECTION 12- ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The ecotoxicity of this product has not been experimentally determined. However, it is expected to have low acute aquatic toxicity based on the acute aquatic toxicity of the individual components and their concentrations in this composition.

12.2 Persistence and degradability

Product is readily biodegradable.

12.3 Bioaccumulation potential

Product is not expected to bioaccumulate

12.4 Mobility

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Additional ecological information: Do not allow material to run into surface waters, wastewater, or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13- DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Always wear proper protective equipment as you would while spraying the two-component foam in a well-ventilated area.

Procedure for handling empty or partially used disposable cylinders (not returnable):

1. DO NOT INCINERATE CYLINDERS.
2. Empty cylinders by dispensing the foam into a waste container like a cardboard box or plastic bag. Depressurize the used cylinders using the dispensing unit with a new nozzle attached. Spray the foam until one of the components/cylinders no longer sprays chemical.
3. Remove the nozzle and then continue to depressurize by dispensing the remaining chemical(s) into a waste container (a box lined with a plastic bag) that has adequate industrial liquid absorbing medium in the bottom. Dispense the residual chemicals until the pressure is down to a minimum or there are just large bubbles in the hose.
4. Close the cylinder valves completely, and then operate the dispensing unit again to empty and depressurize the hoses. Use a 9/16” wrench and remove the hoses from the cylinders. Use caution in case there is some residual chemical and/or pressure in the hoses.
5. Invert the cylinder and point away from face. Slowly open the cylinder over the waste container to catch any residual spray.
6. Return the cylinder to an upright position. Shake the container; there should not be any sloshing of liquid. Make sure to leave valves OPEN-do not close.
7. The user of this material has the responsibility to dispose of empty cylinders, unused material and residues in compliance to all applicable federal, state, international and local regulations regarding the treatment, storage, and disposal for hazardous and nonhazardous wastes. Check with your local waste disposal service for guidance.

NOTE: After dispensing if one cylinder has chemical left in it, treat as hazardous material.

Procedure for handling empty refillable cylinders:

THESE CYLINDERS ARE RETURNABLE. These cylinders (refillable cylinders) are shipped back to ICP Adhesives & Sealants, Inc. to be cleaned, refilled, and redistributed. Return instructions are included in or on the A-cylinder collar.

SECTION 14- TRANSPORTATION

Note: Transportation information is for reference only. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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U.S. Federal Regulations:
OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200
TSCA Status: All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory. This product is not subject to TSCA 12(b) Export Notification.
Superfund Amendments and Reauthorization Act (SARA)
SARA Section 311/312 Hazard Categories: Acute Health Hazard, Sudden Release of Pressure Hazard
SARA 313 Information: No components of the product are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.
SARA 302/304 Extremely Hazardous Substance: No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.
SARA 302/304 Emergency Planning & Notification: No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.
Comprehensive Response Compensation and Liability Act (CERCLA): None of the substances in this product are contained in levels that exceed the threshold (de minimis) reporting levels established by CERCLA
Clean Air Act (CAA) – This product does not have any components listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.
Clean Water Act (CWA) – This products does not have any components listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

U.S. State Regulations:
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: ⚠ **WARNING:** This product can exposure you to chemicals including 1,4-dioxane, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
Other U.S. State Inventories:
Diethylene glycol (CAS#111-46-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: MN, PA
Pentamethyldiethylenetriamine (CAS # 3030-47-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: PA
1,1,1,2- Tetrafluoroethane (CAS #811-97-2) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: ME, WI

Canada Controlled Product Regulations (CPR): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation, and the SDS contains all the information required by the Controlled Products Regulations.

Canadian Ingredient Disclosure List (IDL): None of the substances in this product are listed on the IDL.

Canadian National Pollutant Release Inventory (NPRI): None of the components of this product are listed on the NPRI

WGK, Germany (Water danger/protection): 1

Global Chemical Inventory Lists:
United States: Toxic Substance Control Act (TSCA)- Yes
Canada: Domestic Substances List (DSL)- Yes
Canada: Non-Domestic Substances List (NDSL)- No
Europe: Inventory of New and Existing Chemicals- (EINECS)- Yes
Australia: Australian Inventory of Chemical Substances (AICS)- Yes
New Zealand: New Zealand Inventory of Chemicals (NZLoC)- Yes
China: Inventory of Existing Chemical Substances in China (IECSC)- Yes
Japan: Inventory of Existing and New Chemical Substances (ENCS)- Yes
Korea: Existing Chemicals List (ECL)- Yes
Philippines: Philippines Inventory of Chemicals and Chemical Substances (PICCS)- Yes

15.2 Chemical safety assessment: For this product a chemical safety assessment was not carried out

SECTION 16- OTHER



NFPA: Health Hazard 2; Flammability 1; Reactivity 1
HMIS: Health Hazard 2; Flammability 1; Physical Hazard 1
Hazard Rating: 0=minimal, 1= slight, 2=moderate, 3=severe, 4= extreme

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. ICP Adhesives & Sealants reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

Revision-September 12, 2018 (Date of Preparation) Version 3.4
Replaces Version 3.3- February 12, 2018

SAFETY DATA SHEET
LOW PRESSURE POLYURETHANE FOAM SEALANTS (HC)

SECTION 1- PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Name: Handi-Foam® HC Gun Foam, Handi-Foam® HC Straw Foam, Handi-Foam® Fireblock, Handi-Foam® Fireblock West, Handi-Foam® Black, Handi-Foam® Extreme, Handi-Foam® Window & Door, Handi-Foam® Window & Door West and Handi-Foam® Extreme Window & Door Polyurethane Foam Sealants

SDS ID Number **A16186**

1.2 Relevant identified uses of the substance or mixture and uses advised against

General Use One Component Polyurethane Foam Sealant

Uses advised against

1.3 Details of the supplier and of the safety data sheet

Manufacturer ICP Adhesives & Sealants, Inc.
2775 Barber Road
Norton, Ohio 44203
In Ohio: 330-753-4585; 1-800-321-5585 (Monday-Friday 8:00am-5:00pm EST)

1.4 Emergency telephone numbers

In the U.S.A CHEMTEL 1-800-255-3924

International Emergency CHEMTEL 1-813-248-0585

SECTION 2- HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture

Classification:
Flammable Aerosol- Category 1
Gases Under Pressure- Compressed Gas
Acute Toxicity Inhalation- Category 4
Skin Irritation- Category 2
Serious Eye Irritation- Category 2A
Respiratory Sensitizing- Category 1
Skin Sensitization – Category 1
Effects on or via lactation
Specific Target Organ Toxicity SE 3
Specific Target Organ Toxicity RE 2

2.2 Label elements

Hazard Symbols:



Signal Word: **DANGER**

Hazard Statements:
H222- Extremely flammable aerosol
H280- Contains gas under pressure; may explode if heated
H315- Causes Skin Irritation
H317- May cause an allergic skin reaction
H319- Causes Serious Eye Irritation
H332- Harmful if inhaled
H334- May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335- May cause respiratory irritation
H362- May cause harm to breastfed children
H373- May cause damage to organs through prolonged or repeated exposure

Prevention:
P102- Keep Out of Reach of Children
P202- Do not handle until all safety precautions have been read and understood
P210- Keep away from heat/sparks/open flames/hot surfaces-No Smoking
P211- Do not spray on an open flame or other ignition source
P251- Pressurized Container: Do not pierce or burn, even after use
P261- Avoid breathing vapors or fumes
P262- Do not get in eyes, on skin, or on clothing
P264- Wash hands and other skin areas exposed to material thoroughly after handling
P271- Use only outdoors or in a well-ventilated area
P280- Wear protective gloves, protective clothing and eye protection

P285- In case of inadequate ventilation wear respiratory protection

Response: P302+P352+P333+P313 IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314- Get medical advice if you feel unwell
P342+P311- If experiencing respiratory symptoms: Call a POISON CENTER or doctor
P381- Eliminate all ignition sources if safe to do so

Storage: P403+P405- Store in a well-ventilated place. Store locked up.
P410- Protect from sunlight
P412- Do not expose to temperatures exceeding 50°C/122°F.

Disposal: P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	Ingredient	CAS No.
40-70	Urethane Pre-Polymer Blend (Non-Hazardous Polyol Blend)	Not available
10-30	Alkanes, C14-C16, Chloro	85535-85-9
5-10	4,4' Diphenylmethane diisocyanate (MDI)	101-68-8
5-10	Polymethylene polyphenyl isocyanate (PMDI)	9016-87-9
3-7	Isobutane	75-28-5
3-7	Dimethyl ether	115-10-6
1-5	Propane	74-98-6

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

SECTION 4- FIRST AID MEASURES

4.1 Description of first aid measures

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do so, remove contact lenses, If irritation persists, get medical attention.

Skin: In case of contact, immediately flush skin with plenty of soap and water. Foam will stick to skin, gently wipe product from skin with a damp cloth and wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

Symptoms may not appear immediately. If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible).

SECTION 5- FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use dry chemical, carbon dioxide, foam, Halon 1211 and water spray or fog.
Unsuitable methods of extinction: Do not use water jets and high pressure water as these may spread the fire

5.2 Special hazards arising from the substance or mixture

Contains flammable propellant. Eliminate all ignition sources. Containers may explode due to buildup of pressure when exposed to extreme heat. Aerosol cans exposed to fire or high temperature can rupture and rocket. Cured foam will burn in the presence of heat, oxygen and an ignition source.

5.3 Advice to firefighters

Products of combustion: May include and are not limited to: oxides of carbon, oxides of nitrogen, hydrogen fluoride, and traces of hydrogen cyanide.

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool. Containers may explode if heated.

SECTION 6- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2 Environmental precautions

Do not allow to enter sewers, drains, or waterways

6.3 Methods and materials for containment and cleaning up

Method for containment: Uncured product is very sticky; carefully remove the bulk of the foam by scraping it up and then immediately remove the residue with a rag and solvent such as Handi-Cleaner, mineral spirits, acetone (nail polish remover), paint thinner, etc. Once the product is cured it can only be removed mechanically by scraping, buffing, etc. Use appropriate PPE.

Methods for cleaning up: Scoop up material and place in a disposal container. Dispose of as plastic waste in accordance with all applicable guidelines and regulations. Vapors can accumulate in low areas. Provide ventilation

6.4 Reference to other sections

For indications about waste treatment & disposal, see Section 13

See Section 7 for information about safe handling

SECTION 7- HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from sources of ignition- No smoking. Do not spray on an open flame or other ignition source. Pressurized container: do not pierce or burn, even after use. Container may explode if heated. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Do not swallow. Use only in a well-ventilated area or outdoors. Avoid welding or other “hot work” in the vicinity of exposed cured foam. When using do not eat, drink or smoke. (See section 8)

General hygiene advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking or smoking.

7.2 Conditions for safe storage including any incompatibilities

Store in a dry place. Ideal use temperature is 65°F to 80°F (18°C to 27°C). Do not expose aerosol cans to open flame or temperatures above 122°F (50°C). Excessive heat can cause premature aging of components resulting in a shorter shelf life. Storage below 55°F (12.7°C) may affect foam quality if chemicals are not warmed to room temperature before using. Protect containers from physical abuse. Keep containers upright. **Keep away from children.**

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

CAS No.	Ingredient	OSHA-PEL TWA	ACGIH-TLV	NIOSH	CA AB OEL CA BC OEL CA ON OEL CA QC OEL
101-68-8	4,4’ Diphenylmethane diisocyanate	0.02 PPM; 0.2 mg/m^3 Ceiling	0.005 ppm; 0.051 mg/m^3 (8 hours) TWA	0.005 ppm; 0.050 mg/m^3 TWA 0.02 ppm; 0.2 mg/m^3 CEIL	AB- 0.05 mg/m^3 0.005 ppm BC- 0.005 ppm TWA; 0.01 ppm C ON- 0.005 ppm TWA 0.02 ppm C QC- 0.051 mg/ m^3 0.005 ppm TWAEV
75-28-5	Isobutane		1,000 ppm TWA	800 ppm; 1,900 mg/m^3 TWA	AB- 1,000 ppm TWA BC- 1,000 ppm TWA ON- 1,000 ppm TWA
115-10-6	Dimethyl ether	1,000 ppm (Dupont AEL)			BC- 1,000 ppm TWA ON- 1,000 ppm TWA
74-98-6	Propane	1,000 ppm; 1,800 mg/m^3 TWA	1,000 ppm; 1,800 mg/m^3 TWA	1,000 ppm; 1,800 mg/m^3 TWA	AB-1,000 ppm TWA BC-1,000 ppm TWA QC- 1,800 mg/m^3 1,000 ppm TWAEV

8.2 Exposure Controls:

Engineering measures: Use ventilation adequate to keep exposures below recommended exposure limits.
Eye/face Protection: Wear protective safety glasses with side shields or goggles.
Hand Protection: Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should take into account potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.
Other Protective Equipment: Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.
Respiratory Protection: If atmospheric levels are expected to exceed the exposure levels, use a NIOSH approved air purifying respirator equipped with an organic vapor cartridge and particulate filter. If atmospheric levels exceed 10 times the TLV or PEL level for which an air-purifying respirator is effective, use a powered air purifying respirator (PAPR). The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134).
Hygiene Measures: An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.

SECTION 9- Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Physical Form	Viscous liquid which forms off-white to yellowish foam upon release.
Color	Crème. Some products contain a dye or colorant i.e. Fireblock is orange.
Odor	Slight hydrocarbon odor during curing stage
Odor Threshold:	No data available
Physical State:	Gas/Pressurized Liquid/Semi-Solid
pH:	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Range	No data available
Flash Point:	-156°F (-68.9°C), estimated based on liquefied petroleum gas (Hydrocarbon HC)
Evaporation Rate:	No data available
Flammability:	Flammable
Lower Flammability/Explosive Limit:	No data available
Upper Flammability/Explosive Limit:	No data available
Vapor Pressure	Aerosol product > 50 psig/ 345 kPa
	Final product (sprayed): Very low (not determined)
Vapor Density:	Not available
Relative Density/Specific Gravity:	~ 1.1 (Water = 1)
Solubility:	Insoluble; reacts slowly with water during cure, liberating traces of CO_2
Partition coefficient: n-octanol/water:	No data available
Auto-ignition Temperature:	No data available
Decomposition Temperature;	No data available
Viscosity:	No data available
Explosive Properties:	May be sensitive to mechanical impact or static discharge. Vapor released during and immediately after dispensing may accumulate and ignite explosively if proper ventilation is not employed. Extinguish or remove all sources of ignition during dispensing, until product becomes tack free or skins over.
Oxidizing Properties:	No data available
VOC Content (calculated minus exempt compounds and water)	165 g/l (Handi-Foam Fireblock West and Handi-Foam Window & Door West 160 g/l)

SECTION 10- STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical Stability
Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not pierce or burn, even after use. Avoid temperatures below 40°F (4°C). For longest shelf life, avoid storage above 100°F (38°C).
10.3 Possibility of Hazardous Reactions
Elevated temperatures can cause product to decompose, releasing carbon dioxide. Flammable propellant. Contents are under pressure and exposure to high temperature can cause containers to rupture or explode.
10.4 Conditions To Avoid
Heat. Incompatible materials. Sources of ignition. Avoid temperatures below 40°F (4°C) or temperatures above 100°F (38°C).
10.5 Incompatible Materials
Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers.
10.6 Hazardous Decomposition Products
See Section 5.2 for hazardous decomposition products due to combustion.

SECTION 11- TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Signs and Symptoms of Exposure based on test data and/or information on the components, this material may produce the following health effects:

Eye: May cause eye irritation
Skin: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of skin. May cause an allergic reaction**.**
Inhalation: May be harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled
Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation: stomach distress, nausea, or vomiting.
Chronic: Chlorinated paraffin (C14-C16) may cause harm to breastfed children**.**

Acute Oral Toxicity
Expected to have low acute oral toxicity
Acute inhalation toxicity
Expected to have low acute inhalation toxicity
Acute dermal toxicity
Expected to have low acute dermal toxicity
Skin irritation
Causes skin irritation
Eye irritation
Causes serious eye irritation
Sensitization
May cause skin and respiratory sensitization
Genotoxicity
Genetic toxicity data for MDI is inconclusive. Some in-vitro studies yielded positive results, while other test data was negative
Mutagenicity
Test data using laboratory animals was predominately negative
Specific organ toxicity- single exposure
May cause respiratory irritation
Specific organ toxicity- repeated exposure
May cause damage to the lungs, central nervous system and skin
Aspiration hazard
No data available

11.2 Delayed, Immediate, and Chronic Effects of Short and Long Term Exposure

MDI and PMDI: IARC Group 3 carcinogen- Not classifiable as to its carcinogenicity to humans. Not listed as a carcinogen by ACGIH, OSHA or NTP. MDI/PMDI did not cause birth defects in laboratory animals; fetal effects occurred only at high doses which were toxic to the mother. Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/PMDI (6mg/m^3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects. Chlorinated paraffins (C14-C16) may accumulate in body tissues and fluids rich in lipid content; therefore, this material may cause harm to breastfed children.

SECTION 12- ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The aquatic toxicity of this product has not been experimentally determined. However, it is expected to have low acute aquatic toxicity based on the acute aquatic toxicity of the individual components and their concentration in this mixture.

12.2 Persistence and degradability

Product is not readily biodegradable. In aquatic and terrestrial environments, this material reacts with water

12.3 Bioaccumulative potential

Bioaccumulation potential is low

12.4 Mobility in soil

Expected to have low mobility based on product's reactivity with water

12.5 Other Adverse Effects

Propellant: Ozone Depletion Potential- 0; Global Warming Potential- 1

SECTION 13- DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Methods of disposal

Before disposing of containers, relieve container of any remaining foam and pressure. Allow dispensed product to fully cure before disposing. Never discard in a liquid state. This material must be disposed of in accordance with all local, regional, national, international regulations.

Other disposal recommendations:
Do not puncture or incinerate containers. Use appropriate Personal Protective Equipment.

SECTION 14- TRANSPORTATION

Shipping Information

Containers 1000 cu. cm. (1 liter) or less:

		Due to changes in December 2020: See shipping papers for exact 49 CFR descriptions.
Ground	Consumer Commodity ORM-D	Limited Quantity
Air	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY Packing Instructions (Cargo & Passenger) 203	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY Packing Instructions (Cargo & Passenger) 203
Water	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY

SECTION 15- REGULATORY

15.1 Safety, health, and environmental regulations/ legislations specific for the substance or mixture

U.S. Federal Regulations

OSHA Hazard Communication Standard: This material is classified as a hazardous in accordance with OSHA 29 CFR 1910-1200
TSCA Status: All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory. This product is not subject to TSCA 12(b) Export Notification.
Superfund Amendments and Reauthorization Act (SARA)
SARA Section 311/312 Hazard Categories: Acute Health Hazard, Chronic Health Hazard, Fire Hazard, Reactive Hazard, Sudden Release of Pressure Hazard
SARA 313 Information: MDI and PMDI are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.
SARA 302/304 Extremely Hazardous Substance: No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.
SARA 302/304 Emergency Planning & Notification: No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.
Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substances: 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8), RQ- 2,268 kg (5,000 lbs).
Clean Air Act (CAA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.
Clean Water Act (CWA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

U.S. State Regulations:

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: None of the chemicals are listed.
Other U.S. State Inventories:
4, 4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: CA, DE, ID, IL, ME, MA, MN, NJ, PA, WA, WI
Polymeric MDI (CAS #9016-87-9) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, NJ, MN
Isobutane (CAS #75-28-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, ME, MA, MN, NJ, PA
Dimethyl ether (CAS #115-10-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, ME, MA, MN, NJ, PA
Propane (CAS #74-98-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, MA, MN, NJ, PA, WA

Canada
Consumer Chemicals & Containers Regulation Hazard Symbols:


Flammable


Pressurized Container

Canada Controlled Product Regulations (CPR): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation, and the SDS contains all the information required by the Controlled Products Regulations.
Canadian Ingredient Disclosure List (IDL): 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the IDL.
Canadian National Pollutant Release Inventory (NPRI): MDI and PMDI are listed on the NPRI

Global Chemical Inventory Lists:
United States: Toxic Substance Control Act (TSCA)- Yes
Canada: Domestic Substances List (DSL)- Yes
Canada: Non-Domestic Substances List (NDSL)- No

15.2 Chemical safety assessment: For this product a chemical safety assessment was not carried out

SECTION 16- OTHER



NFPA: Health Hazard 2; Flammability 3; Reactivity 1
HMIS: Health Hazard 2; Flammability 3; Physical Hazard 1
Hazard Rating: 0=minimal, 1= slight, 2=moderate, 3=severe, 4= extreme

Legend:
ACGIH- American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
C- Ceiling Limit
CA AB OEL- Alberta, Canada Occupational Exposure Limit
CA BC OEL- British Columbia, Canada Occupational Exposure Limit
CA ON OEL- Ontario, Canada Occupational Exposure Limit
CA QC OEL- Quebec, Canada Occupational Exposure Limit
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DOT: US Department of Transportation
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
STEL- Short Term exposure limit
TWA- Time weighted average
TWAEV- Time weighted average exposure value
WEEL- US workplace environmental exposure levels

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.
Information contained herein is deemed to be reliable, conservative and accurate. ICP Adhesives & Sealants, Inc. reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

Revision- September 12, 2018 Version 2.7 (Replaces Version 2.6- April 23, 2018)

Safety Data Sheet

SECTION 1 IDENTIFICATION

Havoline LS Gear Lubricant SAE 80W-90

Recommended Use: Axle Oil
Restrictions on Use: Consult supplier when used other than those specified.
Other means of identification: Not applicable
Product Number(s): 250513
Company Identification
Chevron Products Company
a division of Chevron U.S.A. Inc.
5001 Executive Parkway
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency & Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:

- Acute aquatic toxicant: Category 3.
- Chronic aquatic toxicant: Category 3.

Environmental Hazards:
- Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:
Prevention:
- Avoid release to the environment.

Disposal:
- Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Heating may release highly toxic and flammable hydrogen sulfide (H2S). Do not attempt rescue without supplied-air respiratory protection.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %weight
Olefin sulfide	Confidential	1 - 5 %weight
Amines, C12-14-tert-alkyl, C8-20-alkyl phosphates	92623-72-8	1 - < 2.5 %weight
Phosphoric acid ester, amine salt	Mixture	1 - < 2.5 %weight

SECTION 4 FIRST AID MEASURES

Description of first aid measures
Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs. If exposure to hydrogen sulfide (H2S) gas is possible during an emergency, wear an approved, positive pressure air-supplying respirator. Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed
IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing. Hydrogen sulfide has a strong rotten-egg odor. However, with continued exposure and at high levels, H2S may deaden a person's sense of smell. If the rotten egg odor is no longer noticeable, it may not necessarily mean that exposure has stopped. At low levels, hydrogen sulfide causes irritation of the eyes, nose, and throat. Moderate levels can cause headache, dizziness, nausea, and vomiting, as well as coughing and difficulty breathing. Higher levels can cause shock, convulsions, coma, and death. After a serious exposure, symptoms usually begin immediately.

The U.S. National Institute for Occupational Safety and Health (NIOSH) considers air concentrations of hydrogen sulfide gas greater than 100 ppm to be Immediately Dangerous to Life and Health (IDLH).

DELAYED OR OTHER HEALTH EFFECTS: Not classified

Indication of any immediate medical attention and special treatment needed
Note to Physicians: Administration of 100% oxygen and supportive care is the preferred treatment for poisoning by hydrogen sulfide gas. For additional information on H2S, see Chevron SDS No. 301.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
UNSUITABLE EXTINGUISHING MEDIA: No data available

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Nitrogen, Phosphorus, Sulfur.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Observe all relevant local and international regulations. Eliminate all sources of ignition in vicinity of spilled material. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: Do not breathe gas. Wash thoroughly after handling.
Unusual Handling Hazards: Toxic quantities of hydrogen sulfide (H2S) may be present in storage tanks and bulk transport vessels which contain or have contained this material. Persons opening or entering these compartments should first determine if H2S is present. See Exposure Controls/Personal Protection -Section 8. Do not attempt rescue of a person over exposed to H2S without wearing approved supplied-air or self-contained breathing equipment. If there is a potential for exceeding one-half the occupational exposure standard, monitoring of hydrogen sulfide levels is required. Since the sense of smell cannot be relied upon to detect the presence of H2S, the concentration should be measured by the use of fixed or portable devices.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose

such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	120
Nitrile	0.8	240
Viton Butyl	0.3	240

Respiratory Protection: A site-specific risk assessment should be conducted by an Occupational Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved respirator such as:

Air purifying respirator -
If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.
Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).
Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).
Refer to respirator manufacturers to obtain service life of cartridge / filter.

Positive pressure air-supplying respirator -
If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.
If hydrogen sulfide (H2S) airborne concentrations exceed its applicable occupational exposure limits due to this material being heated. For more information on H2S, see Chevron SDS 301.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

Occupational Exposure Limits:

Component	Agency	Form	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	--	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	--	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown to yellow
Physical State: Liquid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: No data available
Relative Vapor Density: No data available
Initial Boiling Point: 315°C (599°F) (Estimated)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: No data available
Melting Point: No data available
Particle Characteristics: Not applicable
Density: 0.8885 kg/l @ 15°C (59°F) (Typical)
Kinematic Viscosity: 135 mm2/s @ 40°C (104°F) (Typical)
Coefficient of Therm. Expansion / °F: No data available
Evaporation Rate: No data available
Decomposition temperature: No data available
Partition coefficient n-octanol/water (logarithmic value): No data available

FLAMMABLE PROPERTIES:
Flammability (solid, gas): Not Applicable

Flashpoint: (Cleveland Open Cup) 200 °C (392 °F) (Minimum)
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: Alkyl Mercaptans (Elevated temperatures), Hydrogen Sulfide (Elevated temperatures)

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Corrosion/Irritation: The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Skin Sensitization: The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The material is not considered an oral toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Carcinogenicity: The material is not considered a carcinogen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Reproductive Toxicity: The material is not considered a reproductive toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Single Exposure: The material is not considered a target organ toxicant (single exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Repeated Exposure: The material is not considered a target organ toxicant (repeated exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Aspiration Hazard: The material is not considered an aspiration hazard.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably

carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).
These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is expected to be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.
The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is not expected to be readily biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Partition coefficient n-octanol/water (logarithmic value): No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: Not applicable

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	05=MA RTK
01-2A=IARC Group 2A	06=NJ RTK
01-2B=IARC Group 2B	07=PA RTK
02=NTP Carcinogen	08-1=TSCA 5(e)
03=EPCRA 313	08-2=TSCA 12(b)
04=CA Proposition 65	

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Gear oil)

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 0 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
SECTION 01 - Company SDS Address information was modified.
SECTION 02 - Environmental Classification information was modified.
SECTION 02 - Hazard Statements information was modified.
SECTION 02 - Precautionary Statements information was modified.
SECTION 04 - Delayed Health Effects - Target Organ(s) information was modified.
SECTION 05 - Fire Fighters Protection Measures information was modified.
SECTION 05 - Special hazards arising from the substance or mixture information was modified.
SECTION 06 - Personal Precautions, Protective Equipment and Emergency Procedures information was modified.
SECTION 08 - Eye/Face Protection information was modified.
SECTION 08 - General Considerations information was modified.
SECTION 08 - Personal Protective Equipment List information was deleted.
SECTION 08 - Personal Protective Equipment information was added.
SECTION 08 - Respiratory Protection information was added.
SECTION 08 - Respiratory Protection information was modified.
SECTION 08 - Skin Protection information was modified.
SECTION 11 - Carcinogenicity information was added.
SECTION 11 - Germ Cell Mutagenicity information was added.
SECTION 11 - Reproductive Toxicity information was added.
SECTION 11 - Specific Target Organ Toxicity - Repeated Exposure information was added.

SECTION 11 - Specific Target Organ Toxicity - Single Exposure information was added.
SECTION 11 - Toxicological Information information was added.
SECTION 11 - Toxicological Information information was modified.
SECTION 12 - Ecological Information information was added.
SECTION 12 - Ecological Information information was deleted.

Revision Date: November 12, 2024

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	PNOS - Particles Not Otherwise Specified

Prepared according to the 29 CFR 1910.1200 (2024) by Chevron.

The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.

SAFETY DATA SHEET

Issuing Date 05-Apr-2022 **Revision Date** 05-Apr-2022 **Revision Number** 2

NGHS / English

The supplier identified below generated this SDS using the UL SDS template. UL did not test, certify, or approve the substance described in this SDS, and all information in this SDS was provided by the supplier or was reproduced from publically available regulatory data sources. UL makes no representations or warranties regarding the completeness or accuracy of the information in this SDS and disclaims all liability in connection with the use of this information or the substance described in this SDS. The layout, appearance and format of this SDS is © 2014 UL LLC. All rights reserved.

1. IDENTIFICATION

Product identifier

Product Name HDX Double Coverage Paint + Primer Spray Paint-Flat Black

Other means of identification

Product Code(s) 1682297

Recommended use of the chemical and restrictions on use

Recommended Use Topcoat Aerosol

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification Acuario USA Corp.

Address 2727 Montana Ave
El, Paso, TX 78093
US

Telephone Phone:1-775-772-2641
Fax: 651-855-5172

E-mail josecassab@pinturasinternaional.com

Emergency telephone number

Company Emergency Phone Number 1-800-222-12222

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Skin sensitization	Category 1

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Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 2
Effects on or via lactation	Yes
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration toxicity	Category 1
Flammable aerosols	Category 1
Gases under pressure	Liquefied Gas

Appearance Black **Physical state** Liquid spray Aerosol **Odor** Petroleum

GHS Label elements, including precautionary statements

Danger

Hazard statements
Harmful if swallowed
Causes skin irritation
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
May cause harm to breast-fed children
Causes damage to organs
Causes damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
Extremely flammable aerosol
Contains gas under pressure; may explode if heated



Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Avoid contact during pregnancy/while nursing
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Contaminated work clothing must not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Do not spray on an open flame or other ignition source
Pressurized container: Do not pierce or burn, even after use
Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label)
IF exposed: Call a POISON CENTER or doctor

Skin
IF ON SKIN: Wash with plenty of water and soap
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
Rinse mouth

Precautionary Statements - Storage
Store locked up
Protect from sunlight. Store in a well-ventilated place
Do not expose to temperatures exceeding 50 °C/122 °F

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information
Harmful to aquatic life with long lasting effects.

Unknown acute toxicity 1.4 % of the mixture consists of ingredient(s) of unknown toxicity
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
1.4 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
1.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
1.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
1.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Acetone	67-64-1	15-50	-	-
Butane	106-97-8	10-25	-	-
Toluene	108-88-3	10-15	-	-
Propane	74-98-6	10-25	-	-
Xylenes	1320-20-7	0.1-2.5	-	-
Carbon black	1333-86-4	0.1-1.0	-	-
Methyl ethyl ketoxime	96-29-7	0.1-1.0	-	-

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention. Immediate medical attention is required.

Inhalation Remove to fresh air. Aspiration into lungs can produce severe lung damage. If breathing

	has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical advice/attention. Delayed pulmonary edema may occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. If symptoms persist, call a physician.
Skin contact	In case of contact with liquefied gas, thaw frosted parts with lukewarm water. May cause an allergic skin reaction. If symptoms persist, call a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed - can enter lungs and cause damage. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical advice/attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically. Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO2). Water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.
Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cylinders may rupture under extreme heat. Damaged cylinders should be handled only by specialists. Containers may explode when heated. Ruptured cylinders may rocket. Product is or contains a sensitizer. May cause sensitization by skin contact.

Explosion Data

Sensitivity to Mechanical Impact	Yes.
Sensitivity to Static Discharge	Yes.

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Contents under pressure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture of weld containers.

Other Information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Flood with water to complete polymerization and scrape off floor.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use spark-proof tools and explosion-proof equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Keep in an area equipped with sprinklers. Do not puncture or incinerate cans. Contents under pressure. In case of rupture. Avoid breathing vapors or mists. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture of weld containers. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Store away from other materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m³ Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m³ STEL: 150 ppm STEL: 560 mg/m³
Butane 106-97-8	STEL: 1000 ppm explosion hazard	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³
Acetone 67-64-1	TWA: 250 ppm	TWA: 1000 ppm total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m³
Xylene 1330-20-7	STEL = 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m³	
Carbon black 1333-86-4	TWA: 3 mg/m³ inhalable particulate matter	TWA: 3.5 mg/m³ (vacated) TWA: 3.5 mg/m³	IDLH: 1750 mg/m³ TWA: 3.5 mg/m³ TWA: 0.1 mg/m³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Toluene 108-88-3	TWA: 50 ppm TWA: 188 mg/m³ Skin	TWA: 20 ppm	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m³ Skin
Butane 106-97-8	TWA: 1000 ppm	STEL: 1000 ppm	TWA: STEL: 1000 ppm	TWA: 800 ppm TWA: 1900 mg/m³
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 10 mg/m³ TWA: 3 mg/m³	TWA: 10 mg/m³	TWA: 10 mg/m³
Propane 74-98-6	TWA: 1000 ppm		TWA:	TWA: 1000 ppm TWA: 1800 mg/m³
Xylene 1330-20-7	TWA: 100 ppm TWA: 434 mg/m³ STEL: 150 ppm STEL: 651 mg/m³	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 434 mg/m³ STEL: 150 ppm STEL: 651 mg/m³
Carbon black 1333-86-4	TWA: 3.5 mg/m³	TWA: 3 mg/m³	TWA: 3 mg/m³	TWA: 3 mg/m³

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection	Impervious gloves. Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid spray; Aerosol
Appearance	Black
Odor	Petroleum
Color	No information available
Odor Threshold	No data available

Property	**Values**	**Remarks Method**
pH	5	
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1	
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	ND	
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks. Excessive heat.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components).
Skin contact	Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. Causes skin irritation. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Repeated exposure may cause skin dryness or cracking.
Ingestion	Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Redness. May cause redness and tearing of the eyes.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,388.90 mg/kg
ATEmix (dermal)	18,333.30 mg/kg
ATEmix (inhalation-gas)	71,790.50 ppm
ATEmix (inhalation-dust/mist)	10.70 mg/L
ATEmix (inhalation-vapor)	30.60 mg/L

Unknown acute toxicity 1.4 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

1.4 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

1.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
1.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
1.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Product Information			
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Toluene	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h
Butane	-	-	= 658 g/m³ (Rat) 4 h
Acetone	> 5800 mg/kg (Rat)	> 15700mg/kg (Rabbit)	= 50.1 mg/L (Rat) 4 h
Propane	-	-	> 800000 ppm (Rat) 15 min
Xylene	= 3500 mg/kg (Rat)	> 4350 mg/kg (Rabbit)	= 29.08 mg/L (Rat) 4 h
Carbon black	> 15400 mg/kg (Rat)	-	> 4.6 mg/m³ (Rat) 4 h
Methyl ethyl ketoxime	= 930 mg/kg (Rat)	1000 - 1800 mg/kg (Rabbit)	> 4.83 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer. This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Toluene 108-88-3	-	Group 3	-	-
Titanium dioxide 13463-67-7	-	Group 2B	-	X
Xylene 1330-20-7	-	Group 3	-	-
Carbon black 1333-86-4	A3	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May cause harm to breastfed babies. Suspected of damaging fertility or the unborn child.

STOT - single exposure Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs if swallowed.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Toluene	72h EC50: = 12.5 mg/L (Pseudokirchneriella subcapitata) 96h EC50: > 433 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 11.0 - 15.0 mg/L (Lepomis macrochirus) 96h LC50: 14.1 - 17.16 mg/L (Oncorhynchus mykiss) 96h LC50: 15.22 - 19.05 mg/L (Pimephales promelas) 96h LC50: 5.89 - 7.81 mg/L (Oncorhynchus mykiss) 96h LC50: 50.87 - 70.34 mg/L (Poecilia reticulata) 96h LC50: = 12.6 mg/L (Pimephales promelas) 96h LC50: = 28.2 mg/L (Poecilia reticulata) 96h LC50: = 5.8 mg/L (Oncorhynchus mykiss) 96h LC50: = 54 mg/L (Oryzias latipes)	EC50 = 19.7 mg/L 30 min	48h EC50: 5.46 - 9.83 mg/L (Daphnia magna) 48h EC50: = 11.5 mg/L (Daphnia magna)
Xylene	No data available	96h LC50: 13.1 - 16.5 mg/L (Lepomis macrochirus) 96h LC50: 13.5 - 17.3 mg/L (Oncorhynchus mykiss) 96h LC50: 2.661 - 4.093 mg/L (Oncorhynchus mykiss) 96h LC50: 23.53 - 29.97 mg/L (Pimephales promelas) 96h LC50: 30.26 - 40.75 mg/L (Poecilia reticulata) 96h LC50: 7.711 - 9.591 mg/L (Lepomis macrochirus) 96h LC50: = 13.4 mg/L (Pimephales promelas) 96h LC50: = 19 mg/L (Lepomis macrochirus) 96h LC50: = 780 mg/L (Cyprinus carpio) 96h LC50: > 780 mg/L	EC50 = 0.0084 mg/L 24 h	48h LC50: = 0.6 mg/L (Gammarus lacustris) 48h EC50: = 3.82 mg/L (water flea)

		(Cyprinus carpio)		
Methyl ethyl ketoxime	72h EC50: = 83 mg/L (Desmodesmus subspicatus)	96h LC50: 777 - 914 mg/L (Pimephales promelas) 96h LC50: = 760 mg/L (Poecilia reticulata)	EC50 = 281 mg/L 17 h EC50 = 950 mg/L 5 min	48h EC50: = 750 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Component Information			
Toluene (108-88-3)			
Method	Value	Exposure time	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)			

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Toluene	2.73
Butane	2.31
Propane	1.09
Xylene	3.15
Methyl ethyl ketoxime	0.65

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D001

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Toluene 108-88-3			Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These	

			chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	

California Waste Codes 331

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste
Toluene 108-88-3	Toxic Ignitable
Xylene 1330-20-7	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN-No.	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.1
Description	UN1950, AEROSOLS, 2.1, LTD QTY
Emergency Response Guide Number	126

TDG

UN-No.	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.1
Description	UN1950, AEROSOLS, 2.1, LTD QTY

MEX

UN-No.	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.1
Description	UN1950, AEROSOLS, 2.1

ICAO

UN-No.	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.1
Description	UN1950, AEROSOLS, 2.1, LTD QTY

IATA

UN-No.	UN1950
Proper Shipping Name	AEROSOLS, FLAMMABLE
Hazard Class	2.1
ERG Code	10L
Description	UN1950, AEROSOLS, FLAMMABLE, 2.1, LTD QTY

IMDG/IMO

UN-No.	UN1950
Proper Shipping Name	AEROSOLS

Hazard Class	2.1
EmS-No.	F-D, S-U
Description	UN1950, AEROSOLS, 2.1, LTD QTY

RID

UN-No.	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.1
Classification code	5F
Description	UN1950, AEROSOLS, 2.1
ADR/RID-Labels	2.1

ADR

UN-No.	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.1
Classification code	5F
Tunnel restriction code	(D)
Description	UN1950, AEROSOLS, 2.1, (D)

ADN

UN-No.	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.1
Classification code	5F
Special Provisions	190, 327, 344, 625
Description	UN1950, AEROSOLS, 2.1
Hazard Labels	2.1
Limited Quantity	1 L
Ventilation	VE01, VE04

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Toluene - 108-88-3	108-88-3	30	1.0
Xylene - 1330-20-7	1330-20-7	6	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X
Xylene 1330-20-7	100 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Toluene 108-88-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Xylene 1330-20-7	100 lb		RQ= 100 lb final RQ RQ= 45.4 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Toluene - 108-88-3	Developmental
Titanium dioxide - 13463-67-7	Carcinogen
Carbon black - 1333-86-4	Carcinogen
Silicon Dioxide - hydrated - 7631-86-9	carcinogen, 10/1/1988 (airborne particles of respirable size)

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Toluene	X	X	X	X	X

FRS SDS Reference Library | S052 | Library page 601

108-88-3					
Butane 106-97-8	X	X	X		
Titanium dioxide 13463-67-7	X	X	X		
Propane 74-98-6	X	X	X		
Xylene 1330-20-7	X	X	X	X	X
Carbon black 1333-86-4	X	X	X		X

16. OTHER INFORMATION

NFPA	**Health hazards** 3	**Flammability** 4	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 3 *	**Flammability** 4	**Physical hazards** 0	**Personal Protection** X

Chronic Hazard Star Legend * = *Chronic Health Hazard*

Prepared By

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 05-Apr-2022

Revision Date 05-Apr-2022

Revision Note No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

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1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT NAME: Electrodes, Aluminum 4043 (H722830-RDP, H722844-RDP)

SUPPLIER: Hobart Brothers Co.
2200 Corporate Drive
Troy, OH 45373 U.S.A.
Phone: 937-332-4000
E-mail: info@hobartwelders.com
Website: www.hobartwelders.com

EMERGENCY TELEPHONE NUMBER: 1-800-424-9300 (Chemtrec CCN11662)

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2. HAZARD IDENTIFICATION:

Emergency Overview: This product is normally not considered hazardous as shipped. Avoid eye contact or inhalation of dust from the product. When this product is used in a welding process, the most important hazards are welding fumes, heat, radiation and electric shock.

Classification of the Substance/Mixture

CLP/GHS Classification (1272/2008):
Acute Toxicity – Inhalation, Category 4
Specific Target Organ Toxicity (Repeated Exposure), Category 1
Hazardous to the Aquatic Environment – Long-Term Hazard, Category 3

EU Classification (67/548/EEC):
Toxic (T), Harmful (Xn), Dangerous for the Environment (N), R48/23/25, R20, R51/53

Hazardous Classification per 29CFR 1910.1200 (Rev. July 1, 2012):
Acute Toxicity – Inhalation, Category 4
Specific Target Organ Toxicity (Repeated Exposure), Category 1
Hazardous to the Aquatic Environment – Long-Term Hazard, Category 3

Labelling:

Symbols: 

Signal Word: Danger

Hazard Statements:

H332 – Harmful if inhaled.

H372 – Cause damage to respiratory system, eyes, kidney, brain and nervous system through prolonged or repeated exposure.

H412 – Harmful to aquatic life with long lasting effects.

Precautionary Statements:

P210 – Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P260 – Do not breathe dust/fume/gas/mist/vapours/spray.
P264 – Wash skin and hair thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P271 – Use only outdoors or in a well-ventilated area.
P273 – Avoid release to the environment.
P280 – Wear protective gloves/eye protection/face protection.
P304+P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 – Call a POISON CENTER or doctor/physician if you feel unwell.

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P314 – Get medical advice/attention if you feel unwell.
P402+P404 – Store in a dry place. Store in a closed container.
P501 – Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS:

Chemical Identity	CAS #	Range %	OSHA PEL (mg/m3)	ACGIH-TLV (mg/m3)	Carcinogenicity	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)	Hazardous Classification per 29CFR 1910.1200 (Rev. July, 2012)
Potassium Chloride	7447-40-7	10-20	NR	NR	No	Not Dangerous	Not Hazardous	Not Hazardous
Sodium Chloride	7647-14-5	10-20	NR	NR	No	Not Dangerous	Not Hazardous	Not Hazardous
Aluminum Fluoride	7784-18-1	1-11	2.5 (as F)	2.5 (as F)	No	(Xn) R22, (Xi) R36/37/38	(H302) Acute Tox. 4 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H335) STOT SE 3	(H302) Acute Tox. 4 (H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H335) STOT SE 3
Lithium Cryolite	13821-20-0	10-20	2.5 (as F)	2.5 (as F)	No	(Xn) R20 (T) R48/23/25 (N),R51/53	(H332) Acute Tox. 4 (H372) STOT RE 1 (H411) Aquatic C. 2	(H332) Acute Tox. 4 (H372) STOT RE 1 (H411) Aquatic C. 2
Potassium Cryolite	13775-52-5	1-11	2.5 (as F)	2.5 (as F)	No	(Xi) R36/37/38	(H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H335) STOT SE 3	(H315) Skin Irrit.. 2 (H319) Eye Irrit.. 2A (H335) STOT SE 3
#Aluminum	7429-90-5	45-55	15	10	No	(F) R11 – R15	(H228) Flam. Sol. 2 (H261) Water-react. 3	(H228) Flam. Sol. 2 (H261) Water-react. 3
Silicon	7440-21-3	0-10	5 (as SiO2)	3 (as SiO2)	No	(F) R11	(H228) Flam. Sol. 2	(H228) Flam. Sol. 2

Important This section covers the materials of which the products manufactured. The fumes and gases produced during normal use of this product are covered in section 10. The term "Hazardous" in "Hazardous Material" should be interpreted as a term required and defined in OSHA Hazard Communication Standard 29CFR 1910-1200 and it does not necessarily imply the existence of hazard. The chemicals or compounds reportable by Section 313 of SARA are marked by the symbol #.

4. FIRST AID MEASURES:

Inhalation: Remove to fresh air immediately or administer oxygen. Get medical attention immediately.
Skin: Flush skin with large amounts of water. If irritation develops and persists, get medical attention.
Eye: Flush eyes with water for at least 15 minutes. Get medical attention.
Ingestion: Obtain medical attention immediately if ingested.
Electric Shock: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires. Immediately contact a physician.

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5. FIRE-FIGHTING MEASURES:

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning material and fire situation.

Unsuitable Extinguishing Media: Do not use water on molten metal. Large fires may be flooded with water from a distance.

Specific Hazards Arising From Chemical: Hydrogen chloride gas, Potassium oxides, Hydrogen fluoride, Aluminum oxide, Silicon oxides

Protective Equipment: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions: Refer to section 8.

Environment Precautions: Refer to section 13.

Cleaning Measures: Solid objects may be picked up and placed into a container. Liquids or pastes should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

7. HANDLING AND STORAGE:

Precautions for Safe Handling: Handle with care to avoid stings or cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

Conditions for Safe Storage: Store in dry place in closed packages. Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION:

Engineering Controls: Avoid exposure to welding fumes, radiation, spatter, electric shock, heated materials and dust. Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area. Keep work place and protective clothing clean and dry. Train welders to avoid contact with live electrical parts and insulate conductive parts. Check condition of protective clothing and equipment on a regular basis.

Exposure limits: Use industrial hygiene equipment to ensure that exposure does not exceed applicable national exposure limits. The limits defined under section 3 can be used as guidance. Unless noted, all values are for 8 hour time weighted average. For information about welding fume analysis refer to section 10.

Biological limits: No available data

Personal protection:

Respiratory protection: Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventilation is not sufficient to keep exposure values within safe limits.

Hands protection: Wear appropriate gloves to prevent skin contact.

EN 12477: Protection gloves for welders

Requirements (EN Levels)	Type A	Type B
Abrasion (Cycles)	2 (500)	1 (100)
Cut (Factor)	1 (1.2)	1 (1.2)
Tear (Newton)	2 (25)	1 (10)
Puncture (Newton)	2 (60)	1 (20)
Burning Behaviour	3	2
Contact Heat	1	1
Convective Heat	2	-
Small Splashes	3	2

Dexterity	**1 (11)**	**4 (6.5)**

Type B gloves are recommended when high dexterity is required as for TIG welding, while type A gloves are recommended for other welding processes. The contact temp (ºC) is 100 and the threshold time (seconds) >15.

Eyes protection: Welder's helmet or face shield with colour absorbing lenses. Shield and filter to provide protection from harmful UV radiation, infra red and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.

Skin protection: Heat-resistant protective clothing. Wear safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry. Clothing should be selected to suit the level, duration and purpose of the welding activity.

Class 1	
Impact of Spatter	**15 Drops**
Heat Transfer (radiation)	**RHTI 24 ≥ 7 seconds**
Process	**Manual welding with light formation of spatter and drops** • **Gas Welding** • **TIG Welding** • **MIG Welding** • **Micro plasma welding** • **Brazing** • **Spot Welding** • **MMA Welding (with rutile-covered electrode)**
Environmental Conditions	**Operation of machines** • **Oxygen cutting machines** • **Plasma cutting machines** • **Resistance welding machines** • **Machines for thermal spraying** • **Bench welding**

Class 2	
Impact of Spatter	**25 Drops**
Heat Transfer (radiation)	**RHTI 24 ≥ 16 seconds**
Process	**Manual welding with heavy formation of spatter and drops** • **MMA welding (with basic or cellulose-covered electrodes)** • **MAG welding (with CO2 or mixed gases)** • **MIG Welding (with high current)** • **Self shielded flux core arc welding** • **Plasma cutting** • **Gouging** • **Oxygen cutting** • **Thermal spraying**
Environmental Conditions	**Operation of machines** • **In confined spaces** • **At overhead welding/cutting or in comparable constrained positions**

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Solid.
Color: White 1191/White 1193/ White 1195/ None 1196/ None 1197/ None 1198/ None
Odour: Odourless
Odour Threshold: Not Available
pH Value: Not Available

Melting Point/Melting Range: 1220° F, 660° C
Freezing Point: Not Available
Boiling Point/Boiling Range: 4566° F, 2519° C
Flash point: Not Available
Evaporation Rate: Not Available
Self-in flammability: Not Available
Explosion limits: Not Available
Vapour pressure: Not Available
Vapour density: Not Available
Density at 20ºC: Not Available
Relative density: 6-9 g/cm3
Solubility: Insoluble in water.
Partition coefficient: Not Available
Auto-ignition temperature: Not Available
Decomposition temperature: Not Available
Other Information: No available data.

10. STABILITY AND REACTIVITY:

Chemical Stability: This product is stable under normal conditions.
Hazardous Reactions: Contact with chemical substances like acids or strong bases cause generation of gas.
Conditions to Avoid: Not applicable.
Incompatible Materials: Reacts with acid.
Hazardous Decomposition Products: When this product is used in a welding process, hazardous decomposition product would include those from volatilization, reaction or oxidation of the material listed in section 3 and those from the base metal and coating. The amount of fumes generated from this product varies with welding parameters and dimensions.
Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in section 3. Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quality of fumes and gases produced.

11. TOXICOLOGICAL INFORMATION:

Signs and Symptoms of Overexposure: Inhalation of welding fumes and gases can be dangerous to your health. Classification of welding fumes is difficult because of varying base materials, coatings, air contaminants and processes. The Internal Agency for Research on Cancer has classified welding fumes as possible carcinogenic to humans (Group 2B).
Acute Effects: Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Signs and symptoms of Potassium Chloride exposure are hyperkalaemia, nausea, vomiting, abdominal pain, diarrhoea, constipation, paraesthesia, thirst, dizziness, rash, pruritus, weakness, muscle cramps, minor psychiatric changes and minor visual changes. May cause sensitisation by skin contact

LD/LC50 Values that are relevant for classification		
Potassium Chloride 7447-40-7		
	LC50	880 mg/l (96h) (fathead minnow)

LD/LC50 Values that are relevant for classification		
Aluminum Fluoride 7784-18-1		
Oral	LD50	1800 mg/kg (rat)
	LC50	8.4 mg/l (3d) (fresh water algae)

LD/LC50 Values that are relevant for classification		
Aluminum 7429-90-5		
Oral	**LD50**	**>15900 mg/kg (rat)**
Inhalation	**LC50**	**>.888 mg/L/4 hr. (rat)**
	LC50	**.12 mg/l (96h) (rainbow trout)**

LD/LC50 Values that are relevant for classification		
Silicon 7440-21-3		
Oral	**LD50**	**3160 mg/kg (rat)**

Chronic Effects: Overexposure to welding fumes may affect pulmonary function.

12. ECOLOGICAL INFORMATION:

Toxicity: Welding rods contain metals which are considered to be very toxic towards aquatic organisms. Finely divided welding rods are therefore considered harmful to aquatic organisms.
Persistence and Degradability: The welding rods consist of elements that can not degrade any further in the environment.
Bio accumulative Potential: Welding rods contain heavy metals which bio accumulates in the food chain. The following figures are the bio concentration factor (BCF) for the substances on their own.
BCF:
Aluminum, BCF: 18
Mobility in Soil: Welding rods are not soluble in water or soil. Particles formed by working welding rods can be transported in the air.
Other Adverse Effects: In massive form, welding rods present no hazards to the aquatic environment.
Welding materials could degrade into components originating from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS:

Product: For product elimination, consult recycling companies or appropriate local authority.
Package: May be disposed in approved landfills provided local regulations are observed.

14. TRANSPORT INFORMATION:

UN-number: Welding rods are not classified as dangerous goods for transport and has no UN number.
UN proper shipping name: Welding rods are not classified as dangerous goods for transport and has no UN proper shipping name.
Transport hazard class: Welding rods are not classified as dangerous goods for transport.
Packing group: There are not any special precautions with which a user should or must comply or be aware of in connection with transport or conveyance either within or outside premises.
Environmental hazards: Welding rods are not environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID and AND) and/or a marine pollutant to the IMDG Code.
Special precautions for users: There are not any special precautions which a user should or must comply or be aware of in connection with transport or conveyance either within or outside premises of the welding rod.
Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code: Welding rods in massive form do not subject under MARPOL 73/78 and the IBC Code. Not applicable – product is transported only in packaged form.

15. REGULATORY INFORMATION:

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Safety, health and environment regulations/legislation specific for the substance or mixture: Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.

Warning: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation. Electric shock can kill. Arc rays and sparks can injure eyes and burn skin. Wear correct hand, head, eye and body protection.

Chemical safety assessment: No

USA: Under the OSHA Hazard Communication Standard, this product is considered hazardous. This product contains or produces a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5 et seq.) United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.

EPCRA/SARA Title III Toxic Chemicals

The following metallic components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA reporting. See Section 3 for weight percentage.

Ingredient Name	Disclosure Threshold
Aluminum	**15 mg/m3**

16. OTHER INFORMATION:

The information in this document is believed to be correct as of the date issued. However, no warranty is expressed to be implied regarding the accuracy or completeness of this information. This information and product are furnished on the condition that the person receiving them shall make his own determinations as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

This Material Safety Data Sheet complies with the EC directives 91/155/EEC and 93/112/EEC, including modifications 2001/58/EC.

Complies with OSHA Communication Standard 29 CFR 1910.1200 and Superfund Amendments and Reauthorization Act (SARA) of 1986 Public Law 99-499

Hazard Statements:

H228 – Flammable solid
H261 – In contact with water releases flammable gas.
H302 – Harmful if swallowed.
H315 – Causes skin irritation.
H317 – May cause an allergic skin reaction.
H319 – Causes serious eye irritation.
H332 – Harmful if inhaled.
H335 – May cause respiratory irritation.
H372 – Causes damage to organs through prolonged or repeated exposure.
H400 – Very toxic to aquatic life

R-Phrases:

R11 – Highly flammable
R15 – Contact with water liberates extremely flammable gases.
R20 – Harmful by inhalation.
R22 – Harmful if swallowed.
R36/37/38 – Irritating to eyes, respiratory system and skin.
R48/23/25 – Toxic: danger of serious damage to health by prolonged exposure through inhalation**.**
R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-Phrases:

S16 – Keep away from source of ignition – No smoking.
S22 – Do not breathe dust.

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S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.
S43 – In case of fire, use fire-fighting equipment on basis class D.
S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61 – Avoid release to the environment.

End of the document.

SAFETY DATA SHEET

This Safety Data Sheet (SDS) is for welding consumables and related products and may be used to comply with OSHA's Hazard Communication standard, 29 CFR 1910.1200, and Superfund Amendments and Reauthorization Act (SARA) of 1986 Public Law 99-499. The OSHA standard must be consulted for specific requirements. This Safety Data Sheet complies with European Commission Directive 89/106/EEC, 91/155/EEC, ISO 11014-1 and ANSI Z400.1. This document is and available on our website at www.hobartbrothers.com, from your sales representative or by calling customer service at +1 (937) 332-4000.

SECTION 1 – IDENTIFICATION

Manufacturer/Supplier Name: HOBART BROTHERS COMPANY
Address: 101 TRADE SQUARE EAST, TROY, OH 45373
Website: www.hobartbrothers.com
Telephone No: +1 (937) 332-4000
Emergency No: +1 (800) 424-9300

Product Type: SHIELDED METAL ARC WELDING (SMAW) ELECTRODES

GROUP A: Product For: CARBON STEEL
AWS Specification: E6010, E6011, E6012, E6013, E6022, E7014, E7024-1

GROUP B: Product For: LOW HYDROGEN CARBON STEEL
AWS Specification: E7016, E7018, E7018-1, E7018-M

GROUP C: Product For: LOW HYDROGEN, LOW ALLOY STEEL
AWS Specification: E7018-A1, E7018-G, E8018-B2, E8018-B2L, E8018-B6, E8018-B8, E8018-C1, E8018-C2, E8018-C3, E8018-G, E9015-B9, E9018-B3, E9018-B3L, E9018-M, E10018-D2, E10018-M, E10518-M, E11018-M, E12018-M

GROUP D: Product For: HIGH STRENGTH CELLULOSE CARBON STEEL
AWS Specification: E7010-P1, E8010-P1, E9010-G, E9010-P1

SECTION 2 – IDENTIFICATION OF HAZARDS

IMPORTANT - This section covers the hazardous materials from which this product is manufactured. This data has been classified according to the criteria of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) as required and defined in OSHA Hazard Communication Standard (29 CFR Part 1910.1200). The fumes and gases produced during welding with normal use of this product are addressed in Section 8.

HAZARD CLASSIFICATION – This product is not classified as hazardous according to applicable GHS hazard classification criteria.

LABEL ELEMENTS: Hazard Symbol – No symbol required
Signal Word – No signal word required
Hazard Statement – Not applicable
Precautionary Statement – Not Applicable

HAZARDOUS INGREDIENT	CAS	EINECS$^{\Gamma}$	REGULATORY HAZARD CLASSIFICATION/DESIGNATION 67/548/EEC$^{\Delta}$	IARC^{E}	NTP^{Z}	OSHA^{H}	65$^{\Theta}$
ALUMINUM OXIDE	1344-28-1	215-691-6	None	---	---	---	---
CALCIUM CARBONATE	1317-65-3	215-279-6	None	---	---	---	---
CELLULOSE	9004-34-6	232-674-9	None	---	---	---	---
CHROMIUM	7440-47-3	231-157-5	O - R9; Carc 1$^{\Phi}$ - R45; Muta 2 - R46; Repr 3 - R62; T+ - R26; T - R24/25, R48/23; C - R35, R42/43; N - R50, R53$^{\Sigma\Sigma\Sigma}$	1$^{\Sigma\Sigma}$, 3$^{\Sigma}$	K$^{\Sigma\Sigma}$	X$^{\Sigma\Sigma}$	X$^{\Sigma\Sigma}$
FLUORSPAR	7789-75-5	232-188-7	None	---	---	---	---
IRON	7439-89-6	231-096-4	None	---	---	---	---
MAGNESIUM CARBONATE	546-93-0	208-915-9	None	---	---	---	---
MANGANESE	7439-96-5	231-105-1	Xn - R20/22^{Y}	---	---	---	---
MICA	12001-26-2	None	None	---	---	---	---
MOLYBDENUM	7439-98-7	231-107-2	Xn - R48/20/22; Xi - R36/37^{X}	---	---	---	---
NICKEL	7440-02-0	231-111-4	Carc 3$^{\Phi}$ - R40; T - R43, R48/23	1	K	X	X
POTASSIUM OXIDE	12136-45-7	235-227-6	None	---	---	---	---
SILICA	14808-60-7	238-878-4	Xn - R48/20, R40/20	1$^{\Psi}$	K	X	X
(Amorphous Silica Fume)	69012-64-2	273-761-5	None	3	K	---	X
SILICON	7440-21-3	231-130-8	None	---	---	---	---
SODIUM OXIDE	1313-59-3	215-208-9	None	---	---	---	---
STRONTIUM CARBONATE	1633-05-2	216-643-7	None	---	---	---	---
TITANIUM DIOXIDE	13463-67-7	236-675-5	None	2B	---	---	---

Γ – European INventory of Existing Chemical Substances Number Δ - European Union Directive 67/548/EEC – Annex 1 E – International Agency for Research on Cancer (1 – Human Carcinogen, 2A – Probably Carcinogenic to Humans, 2B – Possibly Carcinogenic to Humans, 3 – Unclassifiable as to Carcinogenicity in Humans, 4 Probably Not Carcinogenic to Humans) Z – US National Toxicology Program (K – Known Carcinogen, S – Suspected Carcinogen) H – OSHA Known Carcinogen List Θ – California Proposition 65 (X – On Proposition 65 list) --- Dashes indicate the ingredient is not listed with the IARC, NTP, OSHA or 65 Φ – Carcinogen, Mutagen or Reproductive Category per European Council Directive 67/548/EEC Annex I Σ – Metal and Chromium III Compounds ΣΣ – Chromium VI Compounds ΣΣΣ – Chromium (VI) Trioxide EU 67/548/EEC Classification/Designation Y – Manganese Dioxide EU 67/548/EEC Classification/Designation X – Molybdenum Trioxide EU 67/548/EEC Classification/Designation Ψ – Silica Crystalline α-Quartz

The following symbols correspond with the EU 67/548/EEC column above are in European Union Directive 67/548/EEC Annex 1 and EC 1272/2008 Annex VI – Table 3.2:


Xn – Harmful


Xi – Irritant


O - Oxidizer


C – Corrosive


N – Dangerous for the Environment


T – Toxic


T+ - Extremely Toxic

WARNING! - Avoid breathing welding fumes and gases, they may be dangerous to your health. Always use adequate ventilation. Always use appropriate personal protective equipment.

PRIMARY ROUTES OF ENTRY: Respiratory System, Eyes and/or Skin.
ELECTRIC SHOCK: Arc welding and associated processes can kill. See Section 8.

ARC RAYS: The welding arc can injure eyes and burn skin.
FUMES AND GASES: Can be dangerous to your health.

SAFETY DATA SHEET

Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedures and electrodes used. Most fume ingredients are present as complex oxides and compounds and not as pure metals. When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Decomposition products of normal operation include those originating from the volatilization, reaction or oxidation of the materials shown in this section, plus those from the base metal and coating, etc., as noted above. Monitor for the materials identified in the list within this section.

Fumes from the use of this product may contain complex oxides or compounds of the following elements and molecules: amorphous silica fume, calcium oxide, chromium, fluorspar or fluorides, manganese, nickel, silica and strontium. Other reasonably expected constituents of the fume would also include complex oxides of iron, titanium, silicon and molybdenum. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating or galvanizing), the number of welders and the volume of the work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities). One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet if worn or in the worker's breathing zone. See ANSI/AWS F1.1, available from the "American Welding Society", P.O. Box 351040, Miami, FL 33135. Also, from AWS is F1.3 "Evaluating Contaminants in the Welding Environment - A Sampling Strategy Guide", which gives additional advice on sampling.

SECTION 3 - HAZARDOUS INGREDIENTS

CONTENT PERCENTAGE BY INGREDIENTS

			GROUP AND %WEIGHT							GROUP AND %WEIGHT			
INGREDIENT	**CAS**	**EINECS**	**A**	**B**	**C**	**D**	**INGREDIENT**	**CAS**	**EINECS**	**A**	**B**	**C**	**D**
ALUMINUM OXIDE	1344-28-1	215-691-6	<5	---	---	---	MOLYBDENUM	7439-98-7	231-107-2	---	---	<2	<1
CALCIUM CARBONATE	1317-65-3	215-279-6	<2	<2	---	---	NICKEL	7440-02-0	231-111-4	---	---	<5	<2
CELLULOSE	9004-34-6	232-674-9	<5	<5	<5	<5	POTASSIUM OXIDE	12136-45-7	235-227-6	<2	<2	<2	<2
CHROMIUM	7440-47-3	231-157-5	---	---	<9	---	SILICA	14808-60-7	238-878-4	<7	<8	<7	<7
FLUORSPAR	7789-75-5	232-188-7	---	1-12	4-15	---	(Amorphous Silica Fume)	69012-64-2	273-761-5	---	---	---	---
IRON	7439-89-6	231-096-4	70-90	60-80	60-90	70-90	SILICON	7440-21-3	231-130-8	---	<2	<5	<2
MAGNESIUM CARBONATE	546-93-0	208-915-9	<2	<5	<1	<1	SODIUM OXIDE	1313-59-3	215-208-9	<2	<2	<2	<2
MANGANESE	7439-96-5	231-105-1	1-5	1-5	1-5	1-5	STRONTIUM CARBONATE	1633-05-2	216-643-7	---	<2	<2	---
MICA	12001-26-2	None	<5	---	---	---	TITANIUM DIOXIDE	13463-67-7	236-675-5	<14	<10	<5	<5

--- Dashes indicate the ingredient is not present within the group of products

SECTION 4 – FIRST AID MEASURES

INHALATION: If breathing is difficult provide fresh air and contact physician. **EYE/SKIN INJURIES:** For radiation burns, see physician.
Section 11 of this SDS covers the acute effects of overexposure to the various ingredients within the welding consumable. Section 8 of this SDS lists the exposure limits and covers methods for protecting yourself and your co-workers.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Welding consumables applicable to this sheet as shipped are nonreactive, nonflammable, nonexplosive and essentially nonhazardous until welded. Welding arcs and sparks can ignite combustibles and flammable products. Unused welding consumables may remain hot for a period of time after completion of a welding process. See American National Standard (ANSI) Z49.1 for further general safety information on the use and handling of welding consumables and associated procedures.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Solid objects can be picked up and placed into a container. Wear proper personal protective equipment while handling. Do not discard as general trash.

SECTION 7 - HANDLING AND STORAGE

HANDLING: No specific requirements in the form supplied. Handle with care to avoid cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and product labels.
STORAGE: Keep separate from acids and strong bases to prevent possible chemical reactions.

SECTION 8 - EXPOSURE CONTROL AND PERSONAL PROTECTION

Read and understand the instructions and the labels on the packaging. Welding fumes do not have a specific OSHA PEL or ACGIH TLV. The OSHA PEL for Particulate – Not Otherwise Classified (PNOC) is 5 mg/m^3 – Respirable Fraction, 15 mg/m^3 – Total Dust. The ACGIH TLV for Particles – Not Otherwise Specified (PNOS) is 3 mg/m^3 – Respirable Particles, 10 mg/m^3 – Inhalable Particles. The individual complex compounds within the fume may have a lower OSHA PEL or ACGIH TLV than the OSHA Particulate – Not Otherwise Classified (PNOC) and ACGIH Particles – Not Otherwise Specified (PNOS). An Industrial Hygienist, the OSHA Permissible Exposure Limits for Air Contaminants (29 CFR 1910.1000), and the ACGIH Threshold Limit Values should be consulted to determine the specific fume constituents present and their respective exposure limits. European Union Occupational Exposure Limits (EU OEL) are listed with the most stringent limit among the EU member nations. All exposure limits are in milligrams per cubic meter (mg/m^3).

INGREDIENT	**CAS**	**EINECS**	**OSHA PEL**	**ACGIH TLV**	**EU OEL**
ALUMINUM OXIDE##	1344-28-1	215-691-6	5 R*	1 R* {A4}	1.5 R*(Aerosol) - Germany; 2 - Poland
CALCIUM CARBONATE	1317-65-3	215-279-6	5 R*, 5 (as CaO)	3 R*, 2 (as CaO)	3 R* (Aerosol) – Switzerland; 10 I* (Aerosol) – UK
CELLULOSE	9004-34-6	232-674-9	5 R*	10	3 R* (Aerosol) – Switzerland; 10 I* (Aerosol) – UK
CHROMIUM#	7440-47-3	231-157-5	1 (Metal)	0.5 (Metal) {A4}	0.1 I* (Aerosol) - Switzerland
			0.5 (Cr II & Cr III Cpnds)	0.5 (Cr III Cpnds) {A4}	0.005; 0.01*** - Denmark
			0.005 (Cr VI Cpnds)	0.05 (Cr VI Sol Cpnds) {A1}	0.005 (Total Aerosol); 0.015***(Total Aerosol) - Sweden
				0.01 (Cr VI Insol Cpnds) {A1}	
FLUORSPAR	7789-75-5	232-188-7	2.5 (as F)	2.5 (as F) {A4}	1 I* (Aerosol as F); 4*** (Aerosol as F) - Germany
IRON+	7439-89-6	231-096-4	5 R*	5 R* (Fe_2O_3) {A4}	3 R* (Aerosol as Fe_2O_3) – Switzerland
					7*** (as Fe_2O_3) - Denmark
MAGNESIUM CARBONATE	546-93-0	208-915-9	5 R*	3 R*	3 R* (Aerosol) – Switzerland; 10 I* (Aerosol) – UK
MANGANESE#	7439-96-5	231-105-1	5 CL ** (Fume)	0.1 I* {A4} ♦	0.02 R*(Aerosol); 0.16 R*** (Aerosol) - Germany
			1, 3 STEL*** ■	0.02 R* ♦♦	0.2 I*(Aerosol) - Germany
					0.2; 0.4*** - Denmark
MICA	12001-26-2	None	3 R*	3 R*	0.8 R*(Aerosol); 10 I* (Aerosol) – UK
MOLYBDENUM	7439-98-7	231-107-2	5 R*	3 R*; 10 I* (Ele and Insol)	3 R* - Spain;
				0.5 R* (Sol Cpnds) {A3}	4; 10*** - Poland
NICKEL#	7440-02-0	231-111-4	1 (Metal)	1.5 I* (Ele) {A5}	0.05; 0.1*** - Denmark
			1 (Sol Cpnds)	0.1 I* (Sol Cpnds) {A4}	
			1 (Insol Cpnds)	0.2 I* (Insol Cpnds) {A1}	
POTASSIUM OXIDE	12136-45-7	235-227-6	5 R*	3 R*	1.5 R*(Dust NOS - Aerosol) - Germany
SILICA++	14808-60-7	238-878-4	0.1 R*	0.025 R* {A2}	0.1 (Fused, Respirable Dust) - Denmark
					0.2*** (Fused, Respirable Dust) - Denmark
(Amorphous Silica Fume)	69012-64-2	273-761-5	0.8	3 R*	2 I*; 4 I*** - Denmark
SILICON+	7440-21-3	231-130-8	5 R*	3 R*	4 R* (Aerosol); 10 I* (Aerosol) - Denmark
SODIUM OXIDE	1313-59-3	215-208-9	5 R*	3 R*	1.5 R*(Dust NOS - Aerosol) - Germany

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STRONTIUM CARBONATE+	1633-05-2	216-643-7	5 R*	3 R*	1.5 R* (as Dust - NOS) - Germany
TITANIUM DIOXIDE	13463-67-7	236-675-5	15 (Dust)	10 {A4}	1.5 R* - Germany

R* - Respirable Fraction R*** - Respirable Fraction - Short Term Exposure Limit I* - Inhalable Fraction I*** - Inhalable Fraction - Short Term Exposure Limit ** - Ceiling Limit *** - Short Term Exposure Limit + - As a nuisance particulate covered under "Particulates Not Otherwise Regulated" by OSHA or "Particulates Not Otherwise Classified" by ACGIH ++ - Crystalline silica is bound within the product as it exists in the package. However, research indicates silica is present in welding fume in the amorphous (noncrystalline) form #- Reportable material under Section 313 of SARA ## - Reportable material under Section 313 of SARA only in fibrous form ■ - NIOSH REL TWA and STEL ♦ - Limit of 0.1 mg/m^3 is for Inhalable Mn in 2013 by ACGIH ♦♦ - Limit of 0.02 mg/m^3 is for Respirable Mn in 2013 by ACGIH Ele – Element Sol – Soluble Insol – Insoluble Inorg – Inorganic Cpnds – Compounds NOS – Not Otherwise Specified {A1} - Confirmed Human Carcinogen per ACGIH {A2} - Suspected Human Carcinogen per ACGIH {A3} - Confirmed Animal Carcinogen with Unknown Relevance to Humans per ACGIH {A4} - Not Classifiable as a Human Carcinogen per ACGIH {A5} - Not Suspected as a Human Carcinogen per ACGIH (noncrystalline) form

VENTILATION: Use enough ventilation, local exhaust at the arc or both to keep the fumes and gases below the PEL/TLV/OELs in the worker's breathing zone and the general area. Train the welder to keep his head out of the fumes.
RESPIRATORY PROTECTION: Use NIOSH approved or equivalent fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below the regulatory limits.
EYE PROTECTION: Wear helmet or use face shield with filter lens. As a rule of thumb begin with Shade Number 14. Adjust if needed by selecting the next lighter and/or darker shade number. Provide protective screens and flash goggles, if necessary, to shield others from the weld arc flash.
PROTECTIVE CLOTHING: Wear hand, head and body protection which help to prevent injury from radiation, sparks and electrical shock. See ANSI Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection as well as dark nonsynthetic clothing. Train the welder not to touch live electrical parts and to insulate himself from work and ground.
PROCEDURE FOR CLEANUP OF SPILLS OR LEAKS: Not applicable
SPECIAL PRECAUTIONS (IMPORTANT): Maintain exposure below the PEL/TLV/OEL. Use industrial hygiene monitoring to ensure that your use of this material does not create exposures which exceed PEL/TLV/OEL. Always use exhaust ventilation. Refer to the following sources for important additional information: American National Standard (ANSI) Z49.1; Safety in Welding and Cutting published by the American Welding Society, P.O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29 CFR 1910), U.S. Government Printing Office, Washington, DC 20402.

SECTION 9 – PHYSICAL AND CHEMCIAL PROPERTIES

Welding consumables applicable to this sheet as shipped are nonreactive, nonflammable, nonexplosive and essentially nonhazardous until welded.
PHYSICAL STATE: Cored Wire
ODOR: N/A
COLOR: Gray
FORM: Coated Rod

SECTION 10 – STABILITY AND REACTIVITY

GENERAL: Welding consumables applicable to this sheet are solid and nonvolatile as shipped. This product is only intended for use per the welding parameters it was designed for. When this product is used for welding, hazardous fumes may be created. Other factors to consider include the base metal, base metal preparation and base metal coatings. All of these factors can contribute to the fume and gases generated during welding. The amount of fume varies with the welding parameters.
STABILITY: This product is stable under normal conditions.
REACTIVITY: Contact with acids or strong bases may cause generation of gas.

SECTION 11 – TOXICOLOGICAL INFORMATION

SHORT-TERM (ACUTE) OVEREXPOSURE EFFECTS: **Welding Fumes** - May result in discomfort such as dizziness, nausea or dryness or irritation of nose, throat or eyes. **Aluminum Oxide** - Irritation of the respiratory system. **Calcium Oxide** - Dust or fumes may cause irritation of the respiratory system, skin and eyes. **Chromium** - Inhalation of fume with chromium (VI) compounds can cause irritation of the respiratory tract, lung damage and asthma-like symptoms. Swallowing chromium (VI) salts can cause severe injury or death. Dust on skin can form ulcers. Eyes may be burned by chromium (VI) compounds. Allergic reactions may occur in some people. **Fluorides** - Fluoride compounds evolved may cause skin and eye burns, pulmonary edema and bronchitis. **Iron, Iron Oxide** - None are known. Treat as nuisance dust or fume. **Magnesium, Magnesium Oxide** - Overexposure to the oxide may cause metal fume fever characterized by metallic taste, tightness of chest and fever. Symptoms may last 24 to 48 hours following overexposure. **Manganese** - Metal fume fever characterized by chills, fever, upset stomach, vomiting, irritation of the throat and aching of body. Recovery is generally complete within 48 hours of the overexposure. **Mica** - Dust may cause irritation of the respiratory system, skin and eyes. **Molybdenum** - Irritation of the eyes, nose and throat. **Nickel, Nickel Compounds** - Metallic taste, nausea, tightness in chest, metal fume fever, allergic reaction. **Potassium Oxide** - Dust or fumes may cause irritation of the respiratory system, skin and eyes. **Silica (Amorphous)** - Dust and fumes may cause irritation of the respiratory system, skin and eyes. **Sodium Oxide** - Dust or fumes may cause irritation of the respiratory system, skin and eyes. **Strontium Compounds** - Strontium salts are generally non-toxic and are normally present in the human body. In large oral doses, they may cause gastrointestinal disorders, vomiting and diarrhea. **Titanium Dioxide** - Irritation of respiratory system.
LONG-TERM (CHRONIC) OVEREXPOSURE EFFECTS: **Welding Fumes** - Excess levels may cause bronchial asthma, lung fibrosis, pneumoconiosis or "siderosis." **Aluminum Oxide** - Pulmonary fibrosis and emphysema. **Calcium Oxide** - Prolonged overexposure may cause ulceration of the skin and perforation of the nasal septum, dermatitis and pneumonia. **Chromium** - Ulceration and perforation of nasal septum. Respiratory irritation may occur with symptoms resembling asthma. Studies have shown that chromate production workers exposed to hexavalent chromium compounds have an excess of lung cancers. Chromium (VI) compounds are more readily absorbed through the skin than chromium (III) compounds. Good practice requires the reduction of employee exposure to chromium (III) and (VI) compounds. **Fluorides** - Serious bone erosion (Osteoporosis) and mottling of teeth. **Iron, Iron Oxide Fumes** - Can cause siderosis (deposits of iron in lungs) which some researchers believe may affect pulmonary function. Lungs will clear in time when exposure to iron and its compounds ceases. Iron and magnetite (Fe_3O_4) are not regarded as fibrogenic materials. **Magnesium, Magnesium Oxide** - No adverse long term health effects have been reported in the literature. **Manganese** - Long-term overexposure to manganese compounds may affect the central nervous system. Symptoms may be similar to Parkinson's disease and can include slowness, changes in handwriting, gait impairment, muscle spasms and cramps and less commonly, tremor and behavioral changes. Employees who are overexposed to manganese compounds should be seen by a physician for early detection of neurologic problems. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait. **Mica** - Prolonged overexposure may cause scarring of the lungs and pneumoconiosis characterized by cough, shortness of breath, weakness and weight loss. **Molybdenum** - Prolonged overexposure may result in loss of appetite, weight loss, loss of muscle coordination, difficulty in breathing and anemia. **Nickel, Nickel Compounds** - Lung fibrosis or pneumoconiosis. Studies of nickel refinery workers indicated a higher incidence of lung and nasal cancers. **Potassium Oxide** - Prolonged overexposure may cause ulceration of the skin and perforation of the nasal septum, dermatitis and pneumonia. **Silica (Amorphous)** - Research indicates that silica is present in welding fume in the amorphous form. Long term overexposure may cause pneumoconiosis. Noncrystalline forms of silica (amorphous silica) are considered to have little fibrotic potential. **Sodium Oxide** - Prolonged overexposure may cause ulceration of the skin and perforation of the nasal septum, dermatitis and pneumonia. **Strontium Compounds** - Strontium at high doses is known to concentrate in bone. Major signs of chronic toxicity, which involve the skeleton, have been labeled as "strontium rickets". **Titanium Dioxide** - Pulmonary irritation and slight fibrosis.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Persons with pre-existing impaired lung functions (asthma-like conditions). Persons with a pacemaker should not go near welding and cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device. Respirators are to be worn only after being medically cleared by your company-designated physician.
EMERGENCY AND FIRST AID PROCEDURES: Call for medical aid. Employ first aid techniques recommended by the American Red Cross. If irritation or flash burns develop after exposure, consult a physician.
CARCINOGENICITY: Chromium VI compounds, nickel compounds and silica (crystalline quartz) are classified as IARC Group 1 and NTP Group K carcinogens. Titanium dioxide compounds are classified as IARC Group 2B carcinogens. Chromium VI compounds, nickel compounds, silica (crystalline quartz) and welding fumes must be considered as carcinogens under OSHA (29 CFR 1910.1200).
CALIFORNIA PROPOSITION 65: For Group B, C and D products: WARNING: This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code Section 25249.5 et seq.) For Group A products: WARNING: This product, when used for welding or cutting, produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)

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SECTION 12 – ECOLOGICAL INFORMATION

Welding processes can release fumes directly to the environment. Welding wire can degrade if left outside and unprotected. Residues from welding consumables and processes could degrade and accumulate in the soil and groundwater.

SECTION 13 – DISPOSAL CONSIDERATIONS

Use recycling procedures if available. Discard any product, residue, packaging, disposable container or liner in an environmentally acceptable manner, in full compliance with federal, state and local regulations.

SECTION 14 – TRANSPORT INFORMATION

No international regulations or restrictions are applicable. No special precautions are necessary.

SECTION 15 – REGULATORY INFORMATION

Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label and the safety data sheet. Observe all local and federal rules and regulations. Take all necessary precautions to protect yourself and others.

United States EPA Toxic Substance Control Act: All constituents of these products are on the TSCA inventory list or are excluded from listing.

CERCLA/SARA TITLE III: Reportable Quantities (RQs) and/or Threshold Planning Quantities (TPQs):

Ingredient name	**RQ(lb)**	**TPQ (lb)**
Products on this SDS are a solid solution in the form of a solid article.	--	--

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to your Local Emergency Planning Committee.

Section 311 Hazard Class
As shipped: Immediate
In use: Immediate delayed

EPCRA/SARA TITLE III 313 TOXIC CHEMICALS: The following metallic components are listed as SARA 313 "Toxic Chemicals" and potentially subject to annual SARA 312 reporting: Chromium, Manganese and Nickel. See Section 3 for weight percentage.

CANADIAN WHMIS CLASSIFICATION: Class D; Division 2, Subdivision A

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All constituents of these products are on the Domestic Substance List (DSL).

SECTION 16 – OTHER INFORMATION

The following Risk and Safety Phrase Texts and Hazard Statements correspond with the columns labeled - EU 67/548/EEC within Section 2 of this safety data sheet. Take appropriate precautions and protective measures to eliminate or limit the associated hazard.

EU Directive 67/548/EEC - Risk Phrase Texts
R9 – Explosive when mixed with combustible material
R20/22 – Harmful by inhalation and if swallowed
R24/25 – Toxic in contact with skin and if swallowed
R26 – Very toxic by inhalation
R35 – Causes severe burns
R36/37 – Irritating to eyes and respiratory system
R40 – Limited evidence of a carcinogenic effect
R40/20 – Harmful: possible risk of irreversible effects through inhalation
R42/43 – May cause sensitization by inhalation and skin contact
R43 – May cause sensitization by skin contact
R45 – May cause cancer
R46 – May cause heritable genetic damage
R48/20 – Harmful: danger of serious damage to health by prolonged exposure through inhalation
R48/20/22 – Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R48/23 – Toxic: danger of serious damage to health by prolonged exposure through inhalation
R50 – Very toxic to aquatic organisms
R53 – May cause long-term adverse effects in the aquatic environment
R62 – Possible risk of impaired fertility

For additional information please refer to the following sources:
USA: American National Standard (ANSI) Z49.1 "Safety in Welding and Cutting", ANSI/American Welding Society (AWS) F1.5 "Methods for Sampling and Analyzing Gases from Welding and Allied Processes", ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes", AWSF3.2M/F3.2 "Ventilation Guide for Weld Fume", American Welding Society, 550 North Le Jeune Road, Miami, Florida, 33135. Safety and Health Fact Sheets available from AWS at www.aws.org.
OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954.
Threshold Limit Values and Biological Exposure Indices, American Conference of Governmental Hygienists (ACGIH), 6500 Glenway Ave., Cincinnati, Ohio 45211, USA.
NFPA 51B "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169.
UK: WMA Publication 236 and 237, "Hazards from Welding Fume", "The arc welder at work, some general aspects of health and safety".
Canada: CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting and Allied Processes".

Hobart Brothers Company strongly recommends the users of this product study this SDS, the product label information and become aware of all hazards associated with welding. Hobart Brothers Company believes this data to be accurate and to reflect qualified expert opinion regarding current research. However, Hobart Brothers Company cannot make any expressed or implied warranty as to this information.

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1. Identification

Product number	1000008361
Product identifier	**6536 Degreaser and Brake Parts Cleaner III**
Company information	IMPERIAL SUPPLIES LLC PO BOX 11008 GREEN BAY, WI 54307-1008 United States
Company phone	General Assistance 920-490-6711
Emergency telephone US	1-866-836-8855
Emergency telephone outside US	1-952-852-4646
Version #	01
Recommended use	Cleaner
Recommended restrictions	None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Extremely flammable aerosol. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Wear protective gloves.
Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
Hazard(s) not otherwise classified (HNOC)	None known.	
Supplemental information	None.	

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3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	40 - 60
Naphtha, (Petroleum), Hydrotreated Light		64742-49-0	20 - 40
n-Heptane		142-82-5	10 - 20
Carbon Dioxide		124-38-9	2.5 - 10
Methylcyclohexane		108-87-2	1 - 2.5
Other components below reportable levels			0.1 - 1

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Alcohol resistant foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

General fire hazards Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm
Methylcyclohexane (CAS 108-87-2)	PEL	2000 mg/m3
		500 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Methylcyclohexane (CAS 108-87-2)	TWA	400 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
	TWA	9000 mg/m3 5000 ppm
Methylcyclohexane (CAS 108-87-2)	TWA	1600 mg/m3 400 ppm
n-Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3 440 ppm
	TWA	350 mg/m3 85 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Aerosol.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 143.01 °F (61.67 °C) estimated

Flash point 7.4 °F (-13.7 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.9 % estimated

Flammability limit - upper (%) 10.5 % estimated

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

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Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	683.74 °F (362.08 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Heat of combustion (NFPA 30B)	31.22 kJ/g estimated
Oxidizing properties	Not oxidizing.
Specific gravity	0.81 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Aluminum.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Guinea pig	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
	Rabbit	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	55700 ppm, 3 Hours
		132 mg/l, 3 Hours

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Components	Species	Test Results
		50.1 mg/l
Oral		
LD50	Rat	5800 mg/kg
		2.2 ml/kg
Methylcyclohexane (CAS 108-87-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
Vapor		
LC100	Rabbit	59.9 mg/l
LC50	Dog	> 4071 ppm, If <1L: Consumer Commodity Hours
		> 16.3 mg/l, If <1L: Consumer Commodity Hours
	Mouse	> 6564 ppm, If <1L: Consumer Commodity Hours
		> 26.3 mg/l, If <1L: Consumer Commodity Hours
	Rat	> 6564 ppm, If <1L: Consumer Commodity Hours
		> 26.3 mg/l, If <1L: Consumer Commodity Hours
LC50	Rat	16 mg/l, 4 Hours
Naphtha, (Petroleum), Hydrotreated Light (CAS 64742-49-0)		
Acute		
Dermal		
LD50	Guinea pig; Rabbit	> 9.4 ml/kg, 24 Hours
	Rabbit	> 1900 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 5000 mg/m3, 4 Hours
		> 4980 mg/m3
		> 4980 mg/m3, 4 Hours
		> 4.96 mg/l, 4 Hours
		13700 ppm, 4 Hours
Oral		
LD50	Rat	4820 mg/kg
n-Heptane (CAS 142-82-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 29.29 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Methylcyclohexane (CAS 108-87-2)			
Aquatic			
Fish	LC50	Striped bass (Morone saxatilis)	5.8 mg/l, 96 hours
n-Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Acetone	-0.24
Methylcyclohexane	3.61
n-Heptane	4.66

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable, (each not exceeding 1 L capacity)
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	Yes
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.
Packaging Exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

DOT



IATA; IMDG



Marine pollutant



General information DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetone (CAS 67-64-1)
Naphtha, (Petroleum), Hydrotreated Light (CAS 64742-49-0)

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Carbon Dioxide (CAS 124-38-9)
Methylcyclohexane (CAS 108-87-2)
n-Heptane (CAS 142-82-5)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Carbon Dioxide (CAS 124-38-9)
Methylcyclohexane (CAS 108-87-2)
n-Heptane (CAS 142-82-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Carbon Dioxide (CAS 124-38-9)
Methylcyclohexane (CAS 108-87-2)
n-Heptane (CAS 142-82-5)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Ethyl Benzene (CAS 100-41-4)	Listed: June 11, 2004

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Toluene (CAS 108-88-3)	Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-30-2018

Version # 01

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

1. Identification

Product number 1000003101

Product identifier **6540 HEAVY DUTY GLASS CLEANER**

Company information IMPERIAL SUPPLIES LLC
PO BOX 11008
GREEN BAY, WI 54307-1008 United States

Company phone General Assistance 920-490-6711

Emergency telephone US 1-866-836-8855

Emergency telephone outside US 1-952-852-4646

Version # 39

Recommended use Cleaner

Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Flammable aerosols Category 1

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

Response Wash hands after handling.

Storage Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
Isopropyl Alcohol		67-63-0	2.5 - 10
Butane		106-97-8	1 - 2.5
Propane		74-98-6	1 - 2.5
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

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Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Not available.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
		50 ppm
Isopropyl Alcohol (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3
		5 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*
Isopropyl Alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Gas.
Form	Aerosol.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	-156.0 °F (-104.4 °C) propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.977 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.

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Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Acute		
Dermal		
LD50	Guinea pig	7.3 ml/kg, 4 Days
		0.23 ml/kg, 24 Hours
	Rabbit	435 mg/kg, 24 Hours
		0.68 ml/kg, 24 Hours
		0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
Oral		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1414 mg/kg
	Mouse	1519 mg/kg
	Rat	1746 mg/kg
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
Isopropyl Alcohol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	16.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	> 10000 ppm, 6 Hours

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Components	Species	Test Results
Oral		
LD50	Rat	5.84 g/kg
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Not applicable.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not likely, due to the form of the product.

Chronic effects May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
2-Butoxyethanol (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Isopropyl Alcohol (CAS 67-63-0)			
Aquatic			
Algae	IC50	Algae	1000.0001 mg/L, 72 Hours
Crustacea	EC50	Daphnia	13299 mg/L, 48 Hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol	0.83
Butane	2.89
Isopropyl Alcohol	0.05
Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number UN1950
UN proper shipping name Aerosols, flammable, (each not exceeding 1 L capacity)
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions N82
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking.

IATA

UN number UN1950
UN proper shipping name Aerosols, flammable
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Environmental hazards No.
ERG Code 10L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.
Packaging Exceptions LTD QTY

IMDG

UN number UN1950

UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-Butoxyethanol	111-76-2	2.5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)

US. Massachusetts RTK - Substance List

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-21-2014

Version # 39

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Safety Data Sheet
A/C COIL CLEANER

SECTION 1: Identification

Trade Name: A/C COIL CLEANER
Product Identification: 6511-0
Synonyms: Alcohol solvent mixture
Product Use Description: Vent treatment

Distributed By:

IMPERIAL SUPPLIES, LLC.
P.O. BOX 11008
Green Bay, WI 54307 US

Phone: (800) 558-2808
Website: www.imperialsupplies.com

Date Prepared: 12/15/2021
Additional ID: 4704

24 HR Emergency Number: (800) 424-9300

SECTION 2: Hazards Identification

Classifications

Skin Irritation - Category 2
Eye Irritation - Category 2
Flammable Aerosols - Category 1
Gasses under pressure - Liquefied gas



Flammable Compressed Gas Irritant

Signal Word: Danger

Hazard Statements

Keep out of reach of children.
Read label and SDS before use.
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation
Causes skin irritation

Precautionary Statements

Prevention

Keep away from heat, sparks, open flames and hot surfaces. □ -No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Wash hands and face thoroughly after handling.
Wear eye protection. Wear protective gloves.

Response

IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs get medical attention.
Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.

Storage

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Store in a well-ventilated place.

Disposal

Dispose of contents and container in accordance with all local, regional, and national regulations.

Hazards Not Otherwise Specified

Not applicable

SECTION 3: Composition

Chemical Name	CAS #	Concentration % by Weight
Ethanol	64-17-5	70 - 90
Butane	106-97-8	5 - 10
Aliphatic Hydrocarbons	64742-47-8	5 - 10
Isopropanol	67-63-0	5 - 10
Propane	74-98-6	15 - 20

SECTION 4: First Aid Measures

EMERGENCY OVERVIEW

DANGER. Extremely flammable. Contents under pressure. Keep away from heat and flame. Vapor may be harmful. Eye and skin irritant.

EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs get medical attention. Take off contaminated clothing and wash it before reuse.

INHALATION: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

INGESTION: May be harmful or fatal if swallowed. Seek medical attention immediately.

SECTION 5: Firefighting Measures

Suitable fire extinguishing media:

Use water spray, fog or foam.

Specific hazards arising from the chemical:

Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products:

Carbon Dioxide, Carbon Monoxide

Specific fire-fighting methods:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire fighters:

Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full

face-piece operated in a positive pressure mode.

SECTION 6: Accidental Release Measures

Personal precautions:

Put on appropriate personal protective equipment (see section 8)

Environmental precautions and clean-up methods:

Stop all leaks. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all ignition sources. Disperse vapors with water spray. Prevent runoff from entering drains, sewers, streams or other bodies of water. Absorb spill with inert material. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

SECTION 7: Handling and Storage

Do not use or store near heat, sparks or open flame. Exposure to temperatures above 120 F may cause bursting. Do not puncture or incinerate container. Store in a cool, dry place. Do not get in eyes, on skin or on clothing. Intentional misuse by deliberately concentrating and inhaling may be harmful or fatal. Keep out of reach of children.

SECTION 8: Exposure Controls/Personal Protection

Butane(106-97-8)	
ACGIH TLV	1000 ppm
Ethanol(64-17-5)	
OSHA PEL	1000 ppm
ACGIH TLV	1000 ppm
Aliphatic Hydrocarbons(64742-47-8)	
OSHA PEL	100 ppm
Isopropanol(67-63-0)	
OSHA PEL	400 ppm
ACGIH TLV	400 ppm
Propane(74-98-6)	
ACGIH TLV	1000 ppm

Eye Protection: Wear safety glasses or goggles.

Skin Protection: To prevent repeated or prolonged contact, wear impervious gloves (made from rubber, nitrile or neoprene).

Respiratory Protection: When respiratory protection is required use an organic vapor cartridge. A respiratory program that meets OSHA's 29 CFR 1910.34 & ANSI Z88.2requirements must be followed.

Engineering Controls: Good general ventilation required.

SECTION 9: Physical and Chemical Properties

Property	Value	Property	Value
Appearance	CLEAR SPRAY/MIST	Auto Ignition Temp	NOT AVAILABLE
Boiling Point	NOT AVAILABLE	Color	COLORLESS
Decomposition Temperature	NOT AVAILABLE	Evaporation Rate	NOT AVAILABLE
Explosive Limit Ranges	NOT AVAILABLE	Explosive Properties	NOT AVAILABLE
Flash Point	55 F (liquid portion)	Melting/Freezing Point	NOT AVAILABLE
Odor	ALCOHOL	Odor Threshold	NOT AVAILABLE
Oxidizing Properties	NOT AVAILABLE	Partition Coeff	NOT AVAILABLE
Physical State	LIQUID	Relative Density	0.8
Solubility (Water)	COMPLETE	Vapor Density	NOT AVAILABLE
Vapor Pressure	NOT AVAILABLE	Viscosity	NOT AVAILABLE
pH	NOT APPLICABLE		

SECTION 10: Stability and Reactivity

Reactivity
Under normal conditions of storage and use, hazardous reactions will not occur.
Chemical Stability
Stable under normal conditions.
Incompatible Materials
Acids and strong oxidizers
Conditions to Avoid
High temperatures, open flames, sparks, welding.
Hazardous Decomposition Products
CO, CO2
Vapors may ignite at temperatures exceeding flash point.

SECTION 11: Toxicological Information

Primary Route of Entry: Skin contact, inhalation

Acute/Potential Health Effects:

EYES: May cause serious eye irritation. Symptoms include stinging, tearing and redness.

SKIN: May cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying of skin and skin burns.

INHALATION: High vapor/aerosol concentrations (>1000 ppm) are irritating to the eyes and respiratory tract. May cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death. May cause peripheral nervous system disorder and/or damage.

INGESTION: May be harmful if swallowed.

Chronic / Long Term Effects: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Signs and Symptoms of Overexposure: Signs and symptoms of overexposure to this material through breathing, swallowing, and/or passage of material through the skin may include: stomach or intestinal upset (nausea vomiting, diarrhea) irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness).

Target Organ Effects: Central nervous system.

Reproductive/Developmental Information: No data.

Carcinogenic Information: This material is not listed as a carcinogen by IARC, NTP or OSHA.

SECTION 12: Ecological Information

Not available.

SECTION 13: Disposal Considerations

Waste must be disposed of in accordance with federal, state and local environmental control regulations. See label for further instructions.

SECTION 14: Transport Information

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

UN number 1950

Proper shipping name Aerosols, flammable

Class 2.1

Packing group -

SECTION 15: Regulatory Information

If identified components of this product are **CERCLA** hazardous substances and/or listed under **Sections 302, 304, or 313 of Title III** of the Superfund Amendments and Reauthorization Act (SARA) of 1986 (also known as EPCRA, the Emergency Planning and Community Right-To-Know Act), or under **California Proposition 65** (Safe Drinking Water and Toxic Enforcement Act), they are listed above in Section 15 of this SDS.

If identified components of this product are listed under Section 313, this product contains toxic chemicals subject to the reporting requirements of Section 313. This information must be included in all SDS that are copied and distributed for this material.

Title III Section 311/312 Hazardous Categories - 40 CFR 370.2:

ACUTE (X) Chronic (X) Fire (X) Pressure (X) Reactive ( ) Not Applicable ( )

T.S.C.A. Status: All chemical substances found in this product comply with the Toxic Substances Control Act inventory reporting requirements.

RCRA Status: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. If this product becomes hazardous waste it would be assigned RCRA Code(s)

D001

SECTION 16: Other Information

HMIS Ratings :



Disclaimer: This Manufacturer believes that the information contained in the Safety Data Sheet is accurate. The suggested procedures are based on experience as of the date of the publication. They are not necessarily all inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with, nor followed in violation of applicable laws, regulations, rules or insurance requirements.

Preparation/Revision Date: 12/15/2021

SAFETY DATA SHEET

6568

Section 1. Identification

Product name : Imperial® Penetrating Oil

Product code : 6568

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Paint or paint related material.

Manufacturer : Manufactured for: Imperial Supplies LLC
P.O.Box 11008
Green Bay, WI 54307-1008

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 558-2808

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 5.1% (oral), 25.1% (dermal), 26.1% (inhalation)

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Pressurized container: Do not pierce or burn, even after use.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains a chemical known to the State of California to cause cancer. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Heavy Naphthenic Petroleum Oil	≥50 - ≤75	64742-52-5
Kerosine, petroleum	≥10 - ≤25	8008-20-6
Heavy Paraffinic Oil	≤10	64742-65-0
2-Butoxyethanol	≤10	111-76-2
Propane	≤10	74-98-6
Butane	≤5	106-97-8
Calcium Dinonylnaphthalene Sulfonate	≤3	57855-77-3
Odorant	<1	-
Paraffin Oil	≤0.3	64741-89-5

Section 3. Composition/information on ingredients

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Section 4. First aid measures

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	CAS #	Exposure limits
Heavy Naphthenic Petroleum Oil	64742-52-5	**OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2020).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist
Kerosine (petroleum)	8008-20-6	**NIOSH REL (United States, 10/2013).** TWA: 100 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2016). Absorbed through skin.** TWA: 200 mg/m³, (as total hydrocarbon vapor) 8 hours.
Heavy Paraffinic Oil	64742-65-0	**OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2020).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist
2-Butoxyethanol	111-76-2	**ACGIH TLV (United States, 3/2020).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2016). Absorbed through skin.** TWA: 5 ppm 10 hours. TWA: 24 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018). Absorbed through skin.** TWA: 50 ppm 8 hours. TWA: 240 mg/m³ 8 hours.
Propane	74-98-6	**NIOSH REL (United States, 10/2016).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2020). Oxygen Depletion [Asphyxiant]. Explosive potential.**
Butane	106-97-8	**NIOSH REL (United States, 10/2016).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2020). Explosive potential.**

		STEL: 1000 ppm 15 minutes.
Calcium Dinonylnaphthalene Sulfonate	57855-77-3	None.
Odorant		None.
Paraffin Oil	64741-89-5	**OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2020).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist

Occupational exposure limits (Canada)

Ingredient name	CAS #	Exposure limits
Kerosine (petroleum)	8008-20-6	**CA British Columbia Provincial (Canada, 5/2015). Absorbed through skin.** TWA: 200 mg/m³, (as total hydrocarbon vapour) 8 hours. **CA Ontario Provincial (Canada, 7/2015). Absorbed through skin.** TWA: 200 mg/m³ 8 hours. **CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.** 8 hrs OEL: 200 mg/m³, (as total hydrocarbon vapour) 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.** STEL: 250 mg/m³, (measured as total hydrocarbon vapour) 15 minutes. TWA: 200 mg/m³, (measured as total hydrocarbon vapour) 8 hours.
Heavy Paraffinic Oil	64742-65-0	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 5 mg/m³ 8 hours. Form: Mist 15 min OEL: 10 mg/m³ 15 minutes. Form: Mist **CA Quebec Provincial (Canada, 7/2019).** TWAEV: 5 mg/m³ 8 hours. Form: mist STEV: 10 mg/m³ 15 minutes. Form: mist
Ethylene glycol monobutyl ether	111-76-2	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 97 mg/m³ 8 hours. 8 hrs OEL: 20 ppm 8 hours. **CA British Columbia Provincial (Canada, 1/2020).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019).** TWA: 20 ppm 8 hours. **CA Quebec Provincial (Canada, 7/2019).** TWAEV: 20 ppm 8 hours. TWAEV: 97 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 30 ppm 15 minutes. TWA: 20 ppm 8 hours.
Normal propane	74-98-6	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 1000 ppm 8 hours. **CA Quebec Provincial (Canada, 7/2019).**

		TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 1/2020). Oxygen Depletion [Asphyxiant]. Explosive potential.** **CA Ontario Provincial (Canada, 6/2019). Oxygen Depletion [Asphyxiant]. Explosive potential.**
Butane	106-97-8	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 1000 ppm 8 hours. **CA Quebec Provincial (Canada, 7/2019).** TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 1/2020). Explosive potential.** STEL: 1000 ppm 15 minutes. **CA Ontario Provincial (Canada, 6/2019). Explosive potential.** STEL: 1000 ppm 15 minutes.

Occupational exposure limits (Mexico)

	CAS #	Exposure limits
Kerosine (petroleum)	8008-20-6	**NOM-010-STPS-2014 (Mexico, 4/2016). Absorbed through skin.** LMPE-PPT: 200 mg/m³ 8 hours.
Heavy Paraffinic Oil	64742-65-0	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 5 mg/m³ 8 hours. Form: mist
2-Butoxyethanol	111-76-2	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 20 ppm 8 hours.
Propane	74-98-6	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
Butane	106-97-8	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point/boiling range : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 89 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.7%
Upper: 10.6%

Vapor pressure : 101.3 kPa (760 mm Hg) [at 20°C]

Vapor density : 1.55 [Air = 1]

Relative density : 0.82

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 35.085 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Heavy Naphthenic Petroleum Oil	LD50 Oral	Rat	>5000 mg/kg	-
Kerosine (petroleum)	LD50 Oral	Rat	15 g/kg	-
Heavy Paraffinic Oil	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
2-Butoxyethanol	LCLo Inhalation Vapor	Guinea pig	>3.1 mg/l	1 hours
	LD50 Dermal	Guinea pig	>2000 mg/kg	-
	LD50 Oral	Rat	1300 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m^3	4 hours
Calcium Dinonylnaphthalene Sulfonate	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Heavy Naphthenic Petroleum Oil	Skin - Severe irritant	Rabbit	-	500 mg	-
Kerosine (petroleum)	Skin - Moderate irritant	Rabbit	-	0.5 Mililiters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 Percent	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
2-Butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-

Section 11. Toxicological information

Calcium Dinonylnaphthalene Sulfonate	Eyes - Severe irritant Skin - Mild irritant Skin - Moderate irritant	Rabbit Rabbit Rabbit	- - -	100 mg 500 mg 0.5 Ml	- - -

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Kerosine (petroleum)	-	3	-
2-Butoxyethanol	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Kerosine (petroleum)	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
2-Butoxyethanol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Propane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Butane	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Kerosine (petroleum)	Category 2	-	-
2-Butoxyethanol	Category 2	-	-
Propane	Category 2	-	-
Butane	Category 2	-	-

Aspiration hazard

Name	Result
Kerosine (petroleum)	ASPIRATION HAZARD - Category 1
Heavy Paraffinic Oil	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Odorant	ASPIRATION HAZARD - Category 1
Paraffin Oil	ASPIRATION HAZARD - Category 1

Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral Dermal Inhalation (vapors)	23636.36 mg/kg 14980 mg/kg 147.8 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-Butoxyethanol	Acute EC50 >1000 mg/l Fresh water Acute LC50 800000 µg/l Marine water Acute LC50 1250000 µg/l Marine water	Daphnia - Daphnia magna Crustaceans - Crangon crangon Fish - Menidia beryllina	48 hours 48 hours 96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-Butoxyethanol	-	-	Readily

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- **ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). **ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	- **ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	- Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	**Emergency schedules** F-D, S-U Dependent upon container size, this product may ship under the Limited Quantity shipping exception.

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to IMO instruments : Not available.

Proper shipping name : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

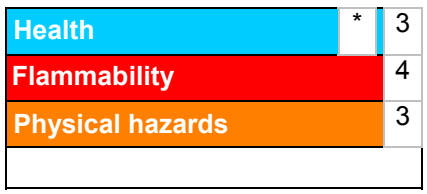
International regulations

Section 15. Regulatory information

International lists : **Australia inventory (AIIC)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory (CSCL): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan Chemical Substances Inventory (TCSI): Not determined.
Thailand inventory: Not determined.
Turkey inventory: Not determined.
Vietnam inventory: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

History

Date of printing : 4/17/2021

Date of issue/Date of revision : 4/17/2021

Date of previous issue : 2/26/2021

Version : 2

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient

Section 16. Other information

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

MAY BE USED TO COMPLY WITH OSHA'S HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200 AND SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 PUBLIC LAW 99-499.
STANDARD SHOULD BE CONSULTED FOR SPECIFIC REQUIREMENTS.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

NAME OF PRODUCT: **PL 9623**

MANUFACTURER/ SUPPLIER
IMPERIAL SUPPLIES LLC
789 ARMED FORCES DR
GREEN BAY, WI 54307-1008 USA

TELEPHONE NUMBER (920) 490-6711
FAX NUMBER: (920) 494-3212

IMPERIAL WEBSITE: **www.imperialsupplies.com**

PRODUCT CLASSIFICATION: Covered Electrode for Shielded Metal Arc Welding (SMAW)

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Welding electrodes are not normally considered hazardous as shipped or when handled. Gloves should be worn when handling to prevent cuts. Avoid inhalation of dust from these products. Skin contact may cause possible allergic reactions. Persons with a pacemaker should not go near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the pacemaker device. When this product is used in a welding process the most important hazards are: heat, radiation, electric shock, and welding fumes.

ROUTES OF ENTRY:
Primary route of entry is the respiratory system. Other possible routes are eyes and/or skin contact.

POTENTIAL HEALTH EFFECTS:

EYES:	RADIATION: Arc rays from welding can injure eyes. HEAT and MOLTEN METAL can severely damage eyes.
SKIN:	HEAT: Spatter and molten metal can cause burn injuries ELECTRICITY: **Electric shock can kill!** RADIATION from the arc: Skin cancer has been reported.
INGESTION:	Not an expected route of entry, but if ingested product could cause serious injury.
INHALATION:	FUMES: Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness of the nose, throat or eyes.

ACUTE HEALTH HAZARDS: See Section 11
CHRONIC HEALTH HAZARDS: See Section 11
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Nothing found.

WARNING: This product contains or produces a chemical known to the State of California to cause birth defects (or other reproductive harm) and cancer. (California Health & Safety Code 25249.5 *et seq.*)

WARNING: avoid breathing welding fumes and gases; they may dangerous to your health. Always use adequate ventilation and use appropriate personal protection equipment.

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CARCINOGENICITY:
CHROMIUM - Chromium VI is listed as being carcinogenic to humans on *IARC* and *NTP* lists, and is listed by *NIOSH* as being a potential occupational carcinogen (with no further categorization).
NICKEL - is listed as being carcinogenic to humans on *IARC* and *NTP* lists, and is listed by *NIOSH* as being a potential occupational carcinogen (with no further categorization).
TITANIUM DIOXIDE is listed as being unclassifiable as to Carcinogenicity in humans by *IARC* and is listed by *NIOSH* as being a potential occupational carcinogen (with no further categorization).
MANGANESE is listed by *ACGIH* as Group A4: Not classifiable as a human carcinogen.
WELDING FUMES (not otherwise specified) are considered to be carcinogenic defined with no further categorization by *NIOSH* and *IARC*.

Package Labeling:
Although this product does not require a hazard warning label in all countries, we recommend that the safety advice should be observed:
Pictograms: GHS07- GHS08




Contains Nickel
R-Phrases:
Limited evidence of carcinogenic effect
May cause sensitization by skin contact
Toxic: danger of serious damage to health by prolonged exposure through inhalation
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Brazing/welding fumes and vapors may cause metal fume fever (headache, dizziness, dryness, cough, nausea, and fever) and these symptoms may appear 4-12 hours after exposure
May cause irritation by prolonged inhalation of brazing/welding fumes.

GHS:
Hazard categories:
Respiratory/skin sensitization: Skin Sens: 1
Carcinogenicity: Carc. 2
Specific target organ toxicity – repeated exposure: STOT RE 1
May cause an allergic skin reaction.
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.

Hazard Statements:

H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure

Precautionary Statements:

P285	In case of inadequate ventilation wear respiratory protection
P314	Get medical advice if you do not feel well
P280	Wear protective gloves/protective clothing/eye protection/face protection
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust/fume/gas/mist/vapors/spray
P501	Dispose of contents/container to waste treatment facility in accordance with local and national regulations

Before using this product, contact your doctor to determine if exposure to product or use of this product will aggravate your medical conditions.

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ADDITIONAL LABELING INFORMATION

As an article the product does not need to be labeled in accordance with EC-directives or respective national laws.
Metals in massive form, alloys, mixtures containing polymers and mixtures containing elastomers do not require a label according to this Annex (Annex I GHS), if they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market, although classified as hazardous in accordance with the criteria of this Annex. Instead, the supplier shall provide the information to downstream users or distributors by means of the SDS.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

IMPORTANT: This section covers the materials from which these products are manufactured. The fumes and gases produced during normal use of these products are covered in Section 8. The chemicals or compounds subject to reporting under Title III, in Section 313, of the Superfund Amendments and Reauthorization Act (SARA) are marked by the symbol #.

		Exposure Limit (mg/m^3)		
INGREDIENTS	**CAS NUMBER**	**OSHA PEL**	**ACGIH-TLV**	**Percent Ingredients (by weight)**
Iron	7439-89-6	10 (as Fe)	5 (as Fe)	40 – 70
Chromium #	7440-47-3	1	0.5	10 – 30
Nickel #	7440-02-0	1	0.2	10 – 30
Titanium Dioxide	13463-67-7	15	10	10 – 30
Feldspar	68476-25-5	10	2	1 – 5
Calcium Carbonate	1317-65-3	5	10	1 – 5
Calcium Fluoride	7789-75-5	2.5 (as F)	2.5 (as F)	1 – 5
Sodium Silicate	1344-09-8	Not listed	Not listed	1 – 5
Potassium Silicate	1312-76-1	Not listed	Not listed	1 – 5
Lithium Aluminum Silicate (Al#)	12068-40-5	Not listed	5 (as Al fume)	1 – 5
Manganese #	7439-96-5	5 (ceiling)	0.1	0.5 - 1.5
Potassium Oxalate	6487-48-5	Not listed	5	0.5 - 1.5

CAS / EINECS NUMBER / HAZARD CLASSIFICATION FOR ABOVE INGREDIENTS

INGREDIENTS	**CAS NUMBER**	**EINECS NUMBER**	**Hazard Classification per ECD 67/548/EEC**
Iron	7439-89-6	231-096-4	No
Chromium #	7440-47-3	231-157-5	No
Nickel #	7440-02-0	231-111-4	Carc. Cat. 3; R40 - T; R48/23 - R43
Titanium Dioxide	13463-67-7	236-675-5	No
Feldspar	68476-25-5	270-666-7	No
Calcium Carbonate	1317-65-3	215-279-6	No
Calcium Fluoride	7789-75-5	232-188-7	No
Sodium Silicate	1344-09-8	215-687-4	No
Potassium Silicate	1312-76-1	215-199-1	No
Lithium Aluminum Silicate (# Al)	12068-40-5	235-098-6	No
Manganese #	7439-96-5	231-105-1	No
Potassium Oxalate	6487-48-5	209-506-8	No

Exposure limits are subject to change. Contact ACGIH and OSHA for current values. See Section 16 for European Council Directive 67/548/EEC R-phrases and S-phrases if applicable.

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SECTION 4: FIRST AID MEASURES

EMERGENCY & FIRST AID PROCEDURES: Call for medical aid. Employ first aid techniques recommended by The American Red Cross.

EYES: Flush with a large amount of fresh water for at least 15 minutes to remove dusts or fumes. Get medical attention. For radiation burns due to arc flash, see physician.
SKIN: Wash affected area with soap and water to remove dust or particles. If rash develops, see a physician. For skin burns from arc radiation, promptly flush with cold water. Get medical attention for burns or for irritations that persist.
INGESTION: Seek medical attention.
INHALATION: Remove to fresh air. If breathing is difficult administer oxygen. If breathing has stopped, begin artificial respiration and obtain medical assistance immediately.

ELECTRIC SHOCK: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live wire parts or wires. If breathing has stopped, begin artificial respiration and obtain medical assistance immediately. If no detectable pulse, begin Cardiopulmonary Resuscitation. (CPR) and immediately call for medical aid.

GENERAL: Move to fresh air and call for medical aid.

SECTION 5: FIRE FIGHTING MEASURES

Non-Flammable: Welding arc and sparks can ignite combustibles. Refer to American National Standard Z49.1 for fire prevention during welding. These products as shipped are non-hazardous, nonflammable, non-explosive, and non-reactive.

FLAMMABLE LIMITS IN AIR (% by volume): UPPER: N/A **LOWER**:N/A

FLASH POINT: N/A

AUTOIGNITION TEMPERATURE: N/A

NFPA HAZARD CLASSIFICATION:

Health: 2	Flammability: 0	Reactivity: 0	Other:

RATING UNDER NATIONAL FIRE PROTECTION 704:

Health: 2	Flammability: 0	Reactivity: 0	Protection:

EXTINGUISHING MEDIA: Use the extinguishing media recommended for the burning material and fire situation.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus as fume or vapors may be harmful.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

HAZARDOUS DECOMPOSITION PRODUCTS: Reasonably expected fume constituents of the fume could include complex oxides of iron, chromium, manganese and nickel.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Solid objects may be picked up and placed in a container. Wear protective clothing and make sure that the solid objects are at room temperature before handling.

PERSONAL PRECAUTIONS: Gloves should be worn when handling to prevent cuts.

ENVIRONMENTAL PRECAUTIONS: Do not flush residue into waterways.

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SECTION 7: HANDLING AND STORAGE

HANDLING: Handle with care to avoid cuts and to keep the wire from piercing the skin. Wear gloves when handling welding consumables. Avoid exposure to dust and do not ingest. Some individuals can develop and allergic reaction to certain materials. Keep all warning labels and identification labels on the product.

STORAGE: Keep material sealed and dry before use and do not remove product identification label or warning label. After using, keep remaining product sealed and dry and do not remove product identification label or warning label.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION





Read and understand the manufacturer's instructions and precautionary label on this product.
Always use adequate ventilation and wear appropriate personal protection. Do not breathe welding fumes and gases; they are dangerous to your health.
See American National Standard Z49.1, Safety in Welding and Cutting, published by the "American Welding Society," 550 N.W. LeJeune Road, Miami, FL 33126 and OSHA Publication 2206 (29CFR 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 for more detail on the following:

ENGINEERING CONTROLS: Proper ventilation must be maintained.

ARC RAYS and **SPARKS** can injure eyes and burn skin. **ELECTRIC SHOCK** can kill! Wear correct hand, eye, head, and body protection.

VENTILATION: Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases below the TLV's in the workers breathing zone and the general area. Train the welder to keep their head out of the fumes. Monitor fume levels and do not exceed permissible exposure limits or values.
RESPIRATORY PROTECTION: Use respirable fume respirator or air supplied respirator when welding in a confined space or where local exhaust or ventilation does not keep exposure below the TLV's.
EYE PROTECTION: Wear a helmet or face shield with a filter lens of shade 12 or darker. Provide screens and flash goggles to shield others.
PROTECTIVE CLOTHING: Wear head, hand, and body protection which help to prevent injury from radiation, sparks, and electrical shock. See ANSI Z49.1. At a minimum, this includes welders' gloves and a protective face shield and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to touch live electrical parts and to insulate themselves from work and ground, especially if clothing and gloves are wet.
WORK HYGIENIC PRACTICES: Do not eat or consume beverages in the work area.

EXPOSURE GUIDELINES: Use industrial hygiene monitoring equipment to ensure that exposure does not exceed applicable national exposure limits. When the electrode is consumed, fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. The fume and decomposition products, not the ingredients in the electrode, are important. Decomposition products include those originating from the volatilization, reaction, or oxidation of materials in Section 3, plus those from the base metal, etc., as noted above. These components are virtually always present as complex oxides and not as metals (Characterization of Arc Welding Fume: American Welding Society). Reasonably expected fume constituents of the fume could include complex oxides of iron, manganese, chromium and nickel.

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The following limits can be used as guidance. Refer to Section 11 for more information about welding fumes.

	CAS	Exposure Limit (mg/m^3)	
Substance	**NUMBER**	**OSHA PEL**	**ACGIH-TLV**
Iron Oxide	1309-37-1	10 (as Fe)	5 (as Fe)
Nitric Oxide	10102-43-9	30	31
Chromium (VI)	not listed	0.005	0.05 (as Cr VI)
Nickel Oxide #	1313-99-1	1 (as Ni)	0.2 (as Ni)
Manganese fume #	7439-96-5	5	0.02

Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may also be formed by radiation from the arc. The fume limit for Cr VI (5 micrograms/m³) may be reached before the ACGIH recommended general welding fume limit of 5 mg/m³ is reached. Monitor fume levels and Cr VI level. Train workers about the hazards of Cr (VI). **Read and comply with the OSHA permissible exposure limits for hexavalent chromium (CrVI), *Fed. Reg. 71 – 10099 (specifically 29 CFR 1910.1026, 29 CFR 1915.1026, and 29 CFR 1926.1126).*** For CrVI, OSHA requires: "The employer shall perform initial monitoring to determine the 8-hour TWA exposure for each employee on the basis of a sufficient number of personal breathing zone air samples to accurately characterize full shift exposure on each shift, for each job classification, in each work area". Specialized equipment is required for monitoring Cr (VI) concentration in the workplace. OSHA Analytical Method Number ID-215 for area and breathing zone sampling and OSHA Analytical Method Number W4001 for wipe samples are listed on the OSHA website - www.osha.gov -as methods for measuring Cr(VI). This standard is complex and the employer should contact an occupational health professional for doing the Cr(VI) monitoring and all other fume monitoring.

Exposure limits are subject to change. Contact ACGIH, OSHA, NIOSH, and IARC for current values.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Solid appearance, non volatile, wire with a flux coating. No odor. Not soluble in water.

MELTING POINT: > 1800 °F (> 1000 °C)

SECTION 10: STABILITY AND REACTIVITY

GENERAL: These items are only intended for normal welding purposes.
STABILITY: Stable under normal conditions.
HAZARDOUS POLYMERIZATION: Will not occur
REACTIVITY: Contact with chemical substances like acids or strong bases could cause generation of gas.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:
Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may also be formed by radiation from the arc.

Refer to applicable national exposure limits for the fume compounds. Reasonably expected fume constituents of the fume could include complex oxides of iron, chromium, nickel and manganese. The employer should contact an occupational health professional for doing fume monitoring to determine fumes emitted and to ensure compliance to the applicable country limits.

Manganese also has a low exposure limit listed in the USA. Other country exposure limits may be different and the appropriate country standards should be used.

SECTION 11: TOXICOLOGICAL INFORMATION

Welding fumes cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure, and the electrode used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality and the amount of ventilation, position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from

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cleaning and degreasing activities). The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans (group 2B).

EFFECTS OF OVEREXPOSURE - Electric arc welding may create one or more of the following health hazards:

FUMES AND GASES can be dangerous to your health.

PRIMARY ROUTES OF ENTRY are the respiratory system. Other possible routes are eyes and/or skin contact. **PREEXISTING** respiratory or allergic conditions may be aggravated in some individuals (i.e. asthma, emphysema).

SHORT TERM (ACUTE) OVEREXPOSURE to welding fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. **PRIMARY ROUTE OF ENTRY** is the respiratory system. **IRON, IRON OXIDE, MANGANESE** - Remove from overexposure and apply artificial respiration if needed. **CHROMIUM**- Inhalation of chromium can cause irritation of nasal membranes and skin. **FLUORIDES** - Fluoride compounds produced may cause eye and skin burns, and pulmonary edema bronchitis. Exposure to extremely high levels of fluorides can cause abdominal pain, diarrhea, muscular weakness, and convulsions. In extreme cases it can cause loss of consciousness and death. **NICKEL, NICKEL OXIDE** - May cause metallic taste, nausea, tightness in chest, fever, and allergic reactions.

LONG TERM (CHRONIC) OVEREXPOSURE may lead to siderosis (iron deposits in lungs) and is believed by some investigators to affect pulmonary functions. **PRIMARY ROUTE OF ENTRY** is the respiratory system. **IRON, IRON OXIDE** - Long term overexposure to iron fumes can cause deposits of iron in the lungs (siderosis). Lungs will clear in time when exposure to iron and its compounds cease. **MANGANESE** - Long term exposure may lead to "Manganism." Central nervous system is affected and symptoms include muscular weakness, impaired speech, impaired movement, and tremors. Exposed workers should get quarterly medical examinations for manganism. Bronchitis and some lung fibrosis have been reported. **FLUORIDES** - Overexposure to fluorides can cause serious bone erosion, excessive calcification of the bone and calcification of the ribs, pelvis and spinal column. May cause skin rash. **NICKEL, NICKEL OXIDE** - Long term overexposure to nickel products may cause lung fibrosis or pneumoconiosis. Long term overexposure to **HEXAVALENT CHROMIUM (CrVI)** is reported to cause lung cancer in humans.

Monitor fume levels and do not exceed permissible limits.

SECTION 12: ECOLOGICAL INFORMATION

MATERIAL: Welding consumables and materials can degrade into the components used to manufacture the product. Avoid exposure to conditions that could lead to accumulation in soils and groundwater.

CONTAMINATED PACKAGING: Empty containers should be taken for local recycling, recovery, or waste disposal. Metals may be recycled.

SECTION 13: DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD: Dispose of any grinding dust and waste residues in accordance with EPA or local regulations. Plastic materials, cardboard, and wire can be re-cycled.

U.S.A. RCRA: Some unused product may contain chromium which is considered hazardous waste if discarded, RCRA ID characteristic Toxic Hazardous Waste D007. Other ingredients in this product may be considered "hazardous material" in other countries and they may require special disposal methods. Contact your local municipality for the proper disposal method. Residues from welding consumables and processes could degrade and accumulate in groundwater. Welding slag from these products could typically contain the following components from the coating of the electrode: Ni, Fe, Cr, Mn, F, Na, Si, and Ca.

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SECTION 14: TRANSPORTATION INFORMATION

DOMESTIC TRANSPORT REGULATIONS (USA): DOT - not regulated.

DOMESTIC TRANSPORT REGULATIONS (CANADA): TDG - not regulated.

DOMESTIC TRANSPORT REGULATIONS (MEXICO): MEX - not regulated.

INTERNATIONAL TRANSPORT REGULATIONS:
ICAO – not regulated
IATA – not regulated
IMDG / IMO – not regulated

OTHER AGENCIES: No international regulations or restrictions are applicable.

Handle with care to avoid damaging the product and keep product dry. Do not remove product identification label or warning label.

SECTION 15: REGULATORY INFORMATION

Read and understand the manufacturer's instructions and precautionary label on this product.
See American National Standard Z49.1, Safety in Welding and Cutting, published by the "American Welding Society," 550 N.W. LeJeune Road, Miami, FL 33126 and OSHA Publication 2206 (29CFR 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 for more information. Before using this product, understand and your employer's safety practices.

U.S. FEDERAL REGULATIONS: Under the OSHA Hazard Communication Standard these products are considered as hazardous.

U.S. EPA TSCA (TOXIC SUBSTANCE CONTROL ACT): All constituents of these products are on the TSCA inventory list or are excluded from listing.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT)/SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATON ACT):

Reportable Quantities (RQ's) and/or Threshold Planning Quantities (TPQ's):

Ingredient name:	RQ (lb)	TPQ(lb)
Product is a solid solution in the form of a solid article	-	-

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to our Local Emergency Planning Committee.

EPCRA/SARA TITLE III 313 TOXIC CHEMICALS:
The following metallic components are listed as SARA 313 "TOXIC CHEMICALS" and are potentially subject to annual SARA 313 reporting. See Section 3 for percent and if the ingredient is present.

INGREDIENT NAME	CAS NUMBER	DISCLOSURE THRESHOLD
Chromium & chromium compounds	7440-47-3	1.0 % de minimis concentration
Chromium VI	Not listed	0.1 % de minimis concentration
Barium compounds	Not listed	1.0 % de minimis concentration
Cobalt	7440-48-4	0.1 % de minimis concentration
Copper	7440-50-8	1.0 % de minimis concentration
Manganese	7439-96-5	1.0 % de minimis concentration
Nickel	7440-02-0	0.1 % de minimis concentration
Aluminum (fume or dust)	7429-90-5	1.0 % de minimis concentration
Silver	7440-22-4	1.0 % de minimis concentration

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Package Labeling:
Additional advice on labeling
As a finished article the product does not need to be labeled in accordance with EC-directives or respective national laws.

International rules may vary and the appropriate regulations should be followed as defined by the country where the products are used.

SECTION 16: OTHER INFORMATION

This Safety Data Sheet has been revised due to modifications to several paragraphs and/or new format.

R-phrases
Nickel
R40: Limited evidence of a carcinogenic effect.
R43 : May cause sensitization by skin contact.
R48/23 : Toxic: danger of serious damage to health by prolonged exposure through inhalation.

S-phrases
Nickel
S2: Keep out of the reach of children
S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection
S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S61: Avoid release to the environment. Refer to special instructions/Safety data sheet.

SUPPLEMENTAL INFORMATION – DEFINITIONS:
IARC: International Agency for the Research on Cancer
NIOSH: National Institute for Occupational Safety and Health
OSHA: U.S. Occupational Safety and Health Administration
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service Registry Number
EINECS: European Inventory of Existing Chemical Substances
PEL: Permissible Exposure Limit
NTP: National Toxicology Program
TLV: Threshold Limit Value
ECD: European Council Directive
GHS: Globally Harmonized System

The information in this SDS was obtained from sources we believe are reliable. However, this information is provided without any representation or warranty, expressed or implied, regarding accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons we do not assume responsibility and expressly disclaim liability of loss, damage, or expense arising from it or any way connected with the handling, storage, use, or disposal of the product.
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JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 08/18/2016 Supersedes:02/16/2016 Version: 1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Trade name : JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.

Product code : 5032

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Brake Fluid

1.3. Details of the supplier of the safety data sheet

Technical Chemical Company
P.O. BOX 139
Cleburne, Texas 76033
T 817-645-6088

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Dam. 1	H318
Repr. 2	H361

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H302+H332 - Harmful if swallowed or if inhaled
H315 - Causes skin irritation
H318 - Causes serious eye damage
H361 - Suspected of damaging fertility or the unborn child

Precautionary statements (GHS-US) : P201 - Obtain special instructions
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust,fume,gas,mist,vapor spray
P264 - Wash affected areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves,protective clothing,eye protection,face protection
P301+P312 - If swallowed: Call a poison center, doctor if you feel unwell
P302+P352 - If on skin: Wash with plenty of soap and water
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention
P310 - Immediately call a poison center,doctor, physician
P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.
P321 - Specific treatment: See section 4.1 on SDS
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P405 - Store locked up
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

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2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Triethylene Glycol Monomethyl Borate Ester	(CAS No) 30989-05-0	15 - 40	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2B, H320
Triethylene Glycol Monomethyl Ether	(CAS No) 112-35-6	10 - 30	Not classified
Methoxy Polyethylene Glycol 350	(CAS No) 9004-74-4	10 - 30	Not classified
Triethylene Glycol Monobutyl Ether	(CAS No) 143-22-6	8 - 18	Eye Dam. 1, H318
Polyalkylene Glycol Monobutyl Ether	(CAS No) 9004-77-7	7 - 13	Not classified
Tetraethylene Glycol	(CAS No) 112-60-7	<= 10	Not classified
3,6,9,12-Tetraoxatetradecane-1,14-diol	(CAS No) 4792-15-8	1 - 5	Not classified
Triethyleneglycol	(CAS No) 112-27-6	1 - 5	Not classified
Diisopropanolamine	(CAS No) 110-97-4	<= 1.5	Not classified
Sodium Hydroxide	(CAS No) 1310-73-2	< 1	Skin Corr. 1A, H314
2,6-Di-tert-butyl-p-cresol	(CAS No) 128-37-0	< 1	Acute Tox. 4 (Oral), H302
Diethylene Glycol Monomethyl Ether	(CAS No) 111-77-3	< 1	Flam. Liq. 4, H227 Repr. 2, H361

The exact percentage is a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Causes damage to organs. Suspected of damaging fertility or the unborn child.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after skin contact : May cause moderate irritation. Itching. Red skin. Skin rash/inflammation. Causes skin irritation.

Symptoms/injuries after eye contact : Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue. Causes serious eye damage.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill. Plug the leak, cut off the supply. Contain released substance, pump into suitable containers.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Use only outdoors or in a well-ventilated area. Avoid breathing dust,fume,gas,mist,vapor spray. Obtain special instructions . Do not handle until all safety precautions have been read and understood.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage area : Keep only in the original container.

Special rules on packaging : Keep only in original container.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium Hydroxide (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³ (Sodium hydroxide; USA; Momentary value; TLV - Adopted Value)

2,6-Di-tert-butyl-p-cresol (128-37-0)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³ (Butylated hydroxytoluene (BHT); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor)

8.2. Exposure controls

Appropriate engineering controls : Local exhaust venilation, vent hoods . Ensure good ventilation of the work station.

Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	Wear appropriate mask.
Other information	:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Color	:	Colourless to light yellow.
Odor	:	Mild . Ammoniacal.
Odor threshold	:	No data available
pH	:	7.7
Relative evaporation rate (butyl acetate=1)	:	No data available
Melting point	:	< -59 °C
Freezing point	:	No data available
Boiling point	:	281 °C
Flash point	:	132 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	< 0.01 mm Hg Estimated
Relative vapor density at 20 °C	:	> 10
Relative density	:	1.03 - 1.08
Solubility	:	Soluble in water. Water: 100% Estimated
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	1100 mm²/s @ -40 deg C Estimated
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosion limits	:	No data available

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation:dust,mist: Harmful if inhaled.

Triethylene Glycol Monomethyl Ether (112-35-6)	
LD50 oral rat	11865 mg/kg (Rat)
LD50 dermal rabbit	7455 mg/kg (Rabbit)

Methoxy Polyethylene Glycol 350 (9004-74-4)	
LD50 oral rat	22000 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)

Triethylene Glycol Monobutyl Ether (143-22-6)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	3480 mg/kg (Rabbit)

Tetraethylene Glycol (112-60-7)	
LD50 oral rat	29000 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)

Triethyleneglycol (112-27-6)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)

Diisopropanolamine (110-97-4)	
LD50 oral rat	4765 mg/kg (Rat)
LD50 dermal rat	16000 mg/kg (Rat)
LD50 dermal rabbit	8000 mg/kg (Rabbit)

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)	
LD50 oral rat	> 5 g/kg
LD50 dermal rabbit	> 2 g/kg
LC50 inhalation rat (mg/l)	200 mg/l

2,6-Di-tert-butyl-p-cresol (128-37-0)	
LD50 oral rat	890 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; >6000 mg/kg bodyweight; Rat)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study; OECD 402: Acute Dermal Toxicity; >2000 mg/kg bodyweight; Rat; Experimental value)

Diethylene Glycol Monomethyl Ether (111-77-3)	
LD50 oral rat	4140 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 20 mg/l/4h (Rat)

Skin corrosion/irritation : Causes skin irritation.
pH: 7.7

Serious eye damage/irritation : Causes serious eye damage.
pH: 7.7

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Polyalkylene Glycol Monobutyl Ether (9004-77-7)	
IARC group	4

2,6-Di-tert-butyl-p-cresol (128-37-0)	
IARC group	3

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed. Harmful if inhaled.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after skin contact : May cause moderate irritation. Itching. Red skin. Skin rash/inflammation. Causes skin irritation.

Symptoms/injuries after eye contact : Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue. Causes serious eye damage.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Triethylene Glycol Monomethyl Ether (112-35-6)	
LC50 fish 1	> 5000 mg/l (LC50; 96 h)
EC50 Daphnia 1	> 10000 mg/l (LC50; 48 h)
Threshold limit algae 1	> 500 mg/l (EC50; 72 h)

Triethylene Glycol Monobutyl Ether (143-22-6)	
LC50 fish 2	2200 mg/l (LC50; 96 h)
EC50 Daphnia 2	> 500 mg/l (EC50; 48 h)
Threshold limit algae 1	> 500 mg/l (EC50; 72 h)

Triethyleneglycol (112-27-6)	
EC50 Daphnia 1	42426 mg/l (EC50; 48 h)
LC50 fish 2	61000 mg/l (LC50; 96 h; Lepomis macrochirus)
Threshold limit algae 2	> 10000 mg/l (EC0; 168 h)

Diisopropanolamine (110-97-4)	
LC50 fish 1	1000 - 2200 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio)
EC50 Daphnia 2	277.7 mg/l (EC50; 48 h)
Threshold limit algae 1	270 mg/l (EC50; 72 h)

Sodium Hydroxide (1310-73-2)	
LC50 fish 1	45.4 mg/l (LC50; Other; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)

2,6-Di-tert-butyl-p-cresol (128-37-0)	
LC50 fish 1	>= 0.57 mg/l (LC0; EU Method C.1; 96 h; Brachydanio rerio; Semi-static system; Fresh water; Experimental value)
EC50 Daphnia 1	0.48 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	0.199 mg/l (LC50; ECOSAR v1.00; 96 h; Pisces)
EC50 Daphnia 2	0.15 mg/l (NOEC; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

Diethylene Glycol Monomethyl Ether (111-77-3)	
LC50 fish 1	1000 mg/l (LC50; 96 h)
EC50 Daphnia 1	> 500 mg/l (EC50; 48 h)
Threshold limit algae 1	> 500 mg/l (EC50; 72 h)

12.2. Persistence and degradability

JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.	
Persistence and degradability	Not established.

Triethylene Glycol Monomethyl Ether (112-35-6)	
Persistence and degradability	Inherently biodegradable. Non degradable in the soil. Photodegradation in the air. Not established.

Methoxy Polyethylene Glycol 350 (9004-74-4)	
Persistence and degradability	Not readily biodegradable in water.
BOD (% of ThOD)	0.1 (28 days)

Triethylene Glycol Monobutyl Ether (143-22-6)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 g O_2 /g substance
Chemical oxygen demand (COD)	1.83 g O_2 /g substance

Tetraethylene Glycol (112-60-7)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.50 g O_2 /g substance (10d)
ThOD	2.23 g O_2 /g substance
BOD (% of ThOD)	0.286

Polyalkylene Glycol Monobutyl Ether (9004-77-7)	
Persistence and degradability	Not established.

3,6,9,12-Tetraoxatetradecane-1,14-diol (4792-15-8)	
Persistence and degradability	Biodegradability in water: no data available.

Triethyleneglycol (112-27-6)	
Persistence and degradability	Inherently biodegradable. Readily biodegradable in water. Photolysis in the air.
Biochemical oxygen demand (BOD)	0.03 g O_2 /g substance
Chemical oxygen demand (COD)	1.57 g O_2 /g substance
ThOD	1.6 g O_2 /g substance

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Diisopropanolamine (110-97-4)	
Persistence and degradability	Not readily biodegradable in water.

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)	
Persistence and degradability	Not established.

Sodium Hydroxide (1310-73-2)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

2,6-Di-tert-butyl-p-cresol (128-37-0)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil. Adsorbs into the soil. Low potential for mobility in soil. Photooxidation in the air.
Biochemical oxygen demand (BOD)	0.51 g O_2 /g substance
Chemical oxygen demand (COD)	2.27 g O_2 /g substance
ThOD	2.977 g O_2 /g substance
BOD (% of ThOD)	0.17

Diethylene Glycol Monomethyl Ether (111-77-3)	
Persistence and degradability	Readily biodegradable in water. Photolysis in the air. Photodegradation in the air.
Chemical oxygen demand (COD)	1.71 g O_2 /g substance
ThOD	1.73 g O_2 /g substance

12.3. Bioaccumulative potential

JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.	
Bioaccumulative potential	Not established.

Triethylene Glycol Monomethyl Ether (112-35-6)	
Log Pow	-1.13
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

Methoxy Polyethylene Glycol 350 (9004-74-4)	
Bioaccumulative potential	Not bioaccumulative.

Triethylene Glycol Monobutyl Ether (143-22-6)	
Log Pow	0.51 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Tetraethylene Glycol (112-60-7)	
Log Pow	-2.18 - -1.38
Bioaccumulative potential	Bioaccumulation: not applicable.

Polyalkylene Glycol Monobutyl Ether (9004-77-7)	
Bioaccumulative potential	Not established.

3,6,9,12-Tetraoxatetradecane-1,14-diol (4792-15-8)	
Log Pow	-2.30 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.

Triethyleneglycol (112-27-6)	
Log Pow	-2.08 - -1.17 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Diisopropanolamine (110-97-4)	
Log Pow	-0.79
Bioaccumulative potential	Bioaccumulation: not applicable.

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)	
Bioaccumulative potential	Not established.

Sodium Hydroxide (1310-73-2)	
Bioaccumulative potential	No bioaccumulation data available.

2,6-Di-tert-butyl-p-cresol (128-37-0)	
BCF fish 1	230 - 2500 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 56 days; Cyprinus carpio; Flow-through system; Fresh water; Experimental value)
Log Pow	5.1 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

Diethylene Glycol Monomethyl Ether (111-77-3)	
Log Pow	-1.14 - -0.68

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Diethylene Glycol Monomethyl Ether (111-77-3)	
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

Triethylene Glycol Monomethyl Ether (112-35-6)	
Surface tension	0.0314 N/m

Methoxy Polyethylene Glycol 350 (9004-74-4)	
Surface tension	0.04 N/m

Tetraethylene Glycol (112-60-7)	
Surface tension	0.019 N/m

Triethyleneglycol (112-27-6)	
Surface tension	0.045 N/m (20 °C)

2,6-Di-tert-butyl-p-cresol (128-37-0)	
Log Koc	Koc,PCKOCWIN v1.66; 23030; Calculated value; log Koc; PCKOCWIN v1.66; 4.362; Calculated value
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

Diethylene Glycol Monomethyl Ether (111-77-3)	
Surface tension	0.035 N/m (25 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): Not regulated,

ICAO/IATA (air): Not regulated,

IMO/IMDG (water): Not regulated,

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not regulated

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Triethylene Glycol Monomethyl Ether (112-35-6)
Subject to reporting requirements of United States SARA Section 313

Triethylene Glycol Monobutyl Ether (143-22-6)
Subject to reporting requirements of United States SARA Section 313

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.

Listed on the Canadian DSL (Domestic Substances List)

Triethylene Glycol Monobutyl Ether (143-22-6)

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Triethylene Glycol Monobutyl Ether (143-22-6)

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)

Listed on ELINCS (European List of Notified Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R41
Xi; R38
R52/53

Full text of R-phrases: see section 16

15.2.2. National regulations

JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Triethylene Glycol Monobutyl Ether (143-22-6)

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)

15.3. US State regulations

JOHNSEN'S DOT 4 BRAKE FLUID 32 FL.OZ.	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes
State or local regulations	U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL) U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List

Triethylene Glycol Monomethyl Ether (112-35-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Methoxy Polyethylene Glycol 350 (9004-74-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Triethylene Glycol Monobutyl Ether (143-22-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Tetraethylene Glycol (112-60-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Polyalkylene Glycol Monobutyl Ether (9004-77-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

3,6,9,12-Tetraoxatetradecane-1,14-diol (4792-15-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Triethyleneglycol (112-27-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Diisopropanolamine (110-97-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Sodium Hydroxide (1310-73-2)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

2,6-Di-tert-butyl-p-cresol (128-37-0)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Diethylene Glycol Monomethyl Ether (111-77-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Triethylene Glycol Monomethyl Ether (112-35-6)

State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - New Jersey - Right to Know Hazardous Substance List

Triethylene Glycol Monobutyl Ether (143-22-6)
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - New Jersey - Right to Know Hazardous Substance List

Triethyleneglycol (112-27-6)
State or local regulations
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

Triethylene Glycol Monomethyl Borate Ester (30989-05-0)
State or local regulations
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

SECTION 16: Other information

Indication of changes : Revision - See : *.

Other information : None.

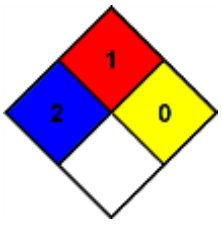
Full text of H-phrases:

H227	Combustible liquid
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H320	Causes eye irritation
H332	Harmful if inhaled
H361	Suspected of damaging fertility or the unborn child

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 1 Slight Hazard

Physical : 0 Minimal Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - TCC

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Safety Data Sheet

KEX Tire Repair Materials

Product #s: KX-511F, KX-512F

SDS #: RTT-KX-007 **Rev. # 5** **Rev. Date: 1/24/2017**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: All Purpose Cement

Chemical Family: Polymer in Alkane & Ketone Solution

Product Use: Adhesive

Restrictions on Use: Use as directed by manufacturer

Manufacturer: KEX Tire Repair
119 Rockland Ave.
Northvale, NJ 07647
Phone: 201 256-8200

24-Hour Emergency Phone Number: North America: 800-424-9300 (CHEMTREC)
International: 703-527-3887 (CHEMTREC) Collect Calls Accepted

2. HAZARDS IDENTIFICATION

GHS Classification

Health Hazards
Skin Irritation, Category 2
Eye Irritation, Category 2A
Reproductive Toxicity, Category 2
Specific Target Organ Systemic Toxicity, Single Exposure, Category 3, Central Nervous System [Inhalation, Ingestion]
Specific Target Organ Systemic Toxicity, Repeated Exposure, Category 3, Liver, Kidney [Inhalation, Ingestion]
Aspiration Hazard, Category 1

Physical Hazards
Flammable Liquid, Category 2

Environmental Hazards
Acute Aquatic Toxicity, Category 2
Chronic Aquatic Toxicity, Category 2

GHS Labeling
Pictograms:

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Signal Word: Danger!

Hazard Statements
H225: Highly flammable liquid and vapor
H304 May be fatal if swallowed and enters airways
H315: Causes skin irritation
H319: Causes serious eye irritation
H336: May cause drowsiness or dizziness
H361: Suspected of damaging fertility or the unborn child
H373: May cause damage to organs prolonged or repeated exposure
H411: Toxic to aquatic life with long lasting effects

Precautionary Statements
Prevention:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233: Keep container tightly closed.
P235: Keep cool.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe vapors.
P264: Wash hands and exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/eye protection/face protection.
P281: Use personal protective equipment as required.

Response:
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313: IF exposed or concerned: Get medical advice/attention.
P321: Specific treatment found in supplemental First Aid Section of this SDS (Section 4).
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P370 + P378: In case of fire: Use dry chemical, foam, carbon dioxide or water spray for extinction.

Storage:
P403 + P233 + P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405: Store locked up.

Disposal:
P501: Dispose of contents/container in accordance with local/regional/national regulations.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical characterization
Polymer in Alkane & Ketone Solution

Component*	CAS #	Weight %
Heptane, isomers	426260-76-6	70 - 80
Acetone	67-64-1	15 - 25

*The above listed components are OSHA hazardous materials which contribute to this products' GHS Hazard Categorization as prescribed in OSHA's Hazard Communication 29 CFR 1910.1200.

4. FIRST AID MEASURES

Inhalation
Symptoms & Effects: Nausea, headache, dizziness, drowsiness, irritation of the nose, throat and lungs
Measures: Immediately move outdoors or to fresh air. If not breathing or if breathing is difficult, provide artificial respiration or oxygen. If irritation occurs, seek medical attention.

Skin Contact
Symptoms & Effects: Slight skin irritation, redness
Measures: Wash contaminated areas with plenty of water after use. Wash contaminated clothing before reuse. If skin irritation persists, seek medical attention.

Eye Contact
Symptoms & Effects: Eye irritation, stinging sensation, tearing, redness
Measures: Immediately flush eyes gently with plenty of water for at least 15 minutes. While washing, remove contact lenses if present and easy to do so and continue rinsing. Rinse beneath eyelids by holding eyelids apart with clean fingers while washing. If eye irritation persists, seek medical attention.

Ingestion
Symptoms & Effects: Stomach or intestinal irritation, nausea, vomiting, nausea, dizziness, drowsiness
Measures: Seek immediate medical attention. If awake and alert, rinse mouth and drink plenty of water to help dilute the material. Do NOT induce vomiting as this substance is an aspiration hazard. Do not give liquids to a drowsy or unconscious person. If vomiting occurs, keep heads below hips to prevent aspiration.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, Carbon dioxide, Alcohol-resistant foam

Unsuitable Extinguishing Media: None identified

Hazardous Combustion Products: Carbon monoxide, Carbon dioxide

Protective Equipment for Fire-Fighters: Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

Precautions for Fire-Fighters: Water may be ineffective for extinguishment, unless used under favorable conditions. Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Use water spray to cool fire exposed containers and structures if this can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Protective Equipment: Recommended to wear chemical splash goggles & gloves and discard of gloves that show tears, pinholes, or signs of wear. Wear proper garments to reduce skin exposure, such as long-sleeves and pants.

Personal Precautions: Persons not wearing proper PPE should be excluded from the area of contamination until clean-up has been completed.

Environmental Precautions: Do not allow discharge into drains, surface waters, or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained or if material discharges into drains or ground water.

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Methods & Materials for Clean-Up: Absorb material with inert materials. Shovel or gather material and place in appropriate container for disposal. Wash spill area thoroughly with plenty of water.

7. HANDLING AND STORAGE

Handling: Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear proper PPE when handling this product including protective gloves, chemical splash goggles, and impervious clothing. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material.

Storage: Store in a cool, well- ventilated area, away from heat and ignition sources as well as from incompatible materials (see below). Keep container tightly closed and store locked up. Keep away from food, drink, and animal foodstuffs.

Incompatible Materials: Strong oxidizing agents, Strong reducing agents, Inorganic acids, Halogens

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits :
Exposure Limits have not been established for this product.

Heptane	**CAS # 426260-76-6**	
OSHA	Permissible Exposure Limit (PEL)	500 ppm (2,000 mg/m^3)
ACGIH	Time Weighted Average (TWA)	400 ppm
NIOSH	Recommended Exposure Limit (REL)	85 ppm (350 mg/m^3)

Acetone	**CAS # 67-64-1**	
OSHA	Permissible Exposure Limit (PEL)	1,000 ppm (2,400 mg/m^3)
ACGIH	Time Weighted Average (TWA)	500 ppm (1,200 mg/m^3)
NIOSH	Recommended Exposure Limit (REL)	250 ppm (590 mg/m^3)

Engineering Controls: Use local exhaust ventilation or in a well-ventilated area.

Occupational Exposure Controls: Ensure adequate ventilation, especially in confined areas. Consider all potential hazards of this material, applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting PPE. Ensure that eyewash stations and safety showers are proximal to the work location. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Protective and Hygiene Measures: Wash hands before breaks and after handling product. When using, do not eat, drink, or smoke. Wash contaminated clothing before re-use.

Eye Protection: Recommended to wear splash goggles when there is potential for the exposure of the eyes to the product. Have a suitable eye wash station or bottle nearby in case of splashing into the eyes.

Hand Protection: Recommended to wear gloves when using this product, and to discard of gloves that show tears, pinholes, or signs of wear.

Skin Protection: Wear long-sleeved clothing, pants and proper foot covering to minimize direct skin contact with the product. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory Protection: A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be appropriate under certain circumstances or if overexposure has been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release or circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Opaque, White Liquid
Odor: Mild
Odor Threshold: No data available
pH: No data available
Melting/Freezing Point: -133°F (-92°C)
Boiling point/range: > 170°F (> 75°C)
Flash point (Tag closed cup): -4°F (-20°C)
Evaporation rate: > 1 n-Butyl Acetate
Flammability: Lower Limit: 1.1% (V) **Upper Limit:** 13.2% (V)
Vapor pressure: 186 mmHg @ 68°F (20°C)
Relative vapor density: > 2 (Air = 1)
Density: 0.71 g/cm^3 (5.9 lb/gal) @ 77°F (25°C)
Solubility in water: Partially Soluble
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: 399°F (204°C)
Ignition temperature: No data available
Decomposition temperature: No data available
Viscosity (dynamic): No data available

10. STABILITY AND REACTIVITY

Reactivity: No decomposition if stored and applied as directed.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Will not react under normal conditions.

Conditions to Avoid: Excessive heat, Repeated direct sunlight exposure

Incompatible Materials: Strong oxidizing agents, Strong reducing agents, Inorganic acids, Halogens

Hazardous decomposition products: Carbon monoxide, Carbon dioxide

11. TOXICOLOGICAL INFORMATION

Primary Routes of Exposure: Skin contact, Eye contact, Ingestion, Inhalation

Symptoms Related to Physical, Chemical and Toxicological Characteristics: Nausea, irritation of the nose, throat and airways, dizziness, drowsiness, and headache. This substance is an aspiration hazard.

Delayed and Immediate Effects & Chronic Effects from Exposure: This material may harm fertility or harm the unborn child due to preliminary tests performed on laboratory animals. Reproductive effects on humans are currently unknown. This material may lead to central nervous system depression and effects such as dizziness and drowsiness. This substance may harm the liver and kidneys with repeated, long-term exposure.

Measures of Toxicity:
Acute toxicities are calculated based on component toxicities.
Mixture: Acute Oral Toxicity: LD_{50} Rat: > 5,000 mg/kg
Acute Dermal Toxicity: LD_{50} Rabbit: > 5,000 mg/kg
Acute Inhalation Toxicity: LC_{50} Rat: > 20 mg/l

n-Heptane	**CAS # 142-82-5**
Acute Oral Toxicity	LD_{50} Rat: > 5,000 mg/kg
Acute Dermal Toxicity	LD_{50} Rat: > 2,000 mg/kg
Acute Inhalation Toxicity	LC_{50} Rat: 103,000 mg/m^3

Acetone	**CAS # 67-64-1**
Acute Oral Toxicity	LD_{50} Rat: 5,800 mg/kg
Acute Dermal Toxicity	LD_{50} Rat: > 20,000 mg/kg
Acute Inhalation Toxicity	LC_{50} Rat: > 16,000 ppmV

Carcinogen Claims:
OSHA: **No**
International Agency for Research on Cancer (IARC): **No; 4 [Probably Not Carcinogenic]**
ACGIH: **No; A5 [Not Suspected]**
National Toxicology Program (NTP) Report on Carcinogens: **No**

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12. ECOLOGICAL INFORMATION

Eco-toxicity: This substance is expected to be toxic to aquatic organisms with long lasting effects. It is strongly advised that this substance does not enter the environment. Local authorities should be advised if significant spillages cannot be contained or if material discharges into drains or ground water.

n-Heptane	**CAS # 142-82-5**
Toxicity to Fish	LC_{50} – 4.0 mg/l (Goldfish; 24 h)
	LC_{50} – 375 mg/l (Tilapia; 96 h)
Toxicity to Daphnia	EC_{50} – 1.5 mg/l (Water flea; 48 h)

Acetone	**CAS # 67-64-1**
Toxicity to Fish	LC_{50} – 5,540 mg/l (Rainbow Trout; 96 h)
	LC_{50} – 8,300 mg/l (Bluegill; 96 h)
	LC_{50} – 8,733 mg/l (Fathead Minnow; 96 h)
Toxicity to Daphnia	EC_{50} – 13,500 mg/l (Water flea; 48 h)

Persistence & Degradability: No data available; Substance is readily biodegradable.
Bio-accumulative Potential: No data available
Mobility in Soil: No data available
Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State or Local regulations.
Contaminated packaging should be emptied as far as possible before disposal.

14. TRANSPORT INFORMATION

DOT SHIPPING CLASSIFICATION:
UN NUMBER: UN1133
PROPER SHIPPING NAME: Adhesives (Contains: n-Heptane, Acetone)
TRANSPORTATION HAZARD CLASS: 3
PACKING GROUP: II
HAZARD LABEL: 3

IMDG (Marine) SHIPPING CLASSIFICATION:
IMDG CODE: 3
UN NUMBER: UN1133
MARINE POLLUTANT: Yes
EmS: F-E; S-D
IMDG PACKING GROUP: II
HAZARD LABEL: 3

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Description of the goods
ADHESIVES (Contains: n-Heptane, Acetone)

IATA (Air) SHIPPING CLASSIFICATION:
ICAO/IATA-DGR: 3
UN NUMBER: UN1133
HAZARD LABEL: 3
Description of the goods
Adhesives (Contains: n-Heptane, Acetone)

15. REGULATORY INFORMATION

All components of this product conform to the following national inventory requirements. US TSCA, EU EINECS and Canada DSL

SARA Title III

Section 302 – Extremely Hazardous Chemicals
The following ingredients are subject to the supplier notification requirements of Section 302 of the Superfund Amendments and Reauthorization Act (SARA/EPCRA) and the requirements of 40 CFR Part 37

None Listed

Section 313 – Toxic Chemicals
The following ingredients are subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act (SARA/EPCRA) and the requirements of 40 CFR Part 37

Component	CAS #	Weight %	CERCLA RQ
Acetone	67-64-1	10 – 20	5,000

OTHER FEDERAL REGULATIONS

Components of this product are subject to RCRA Hazardous Waste requirements.
Clean Air Act (CAA) Hazardous Air Pollutants requirements and OSHA Process Safety Management (PSM) high hazard requirements.

CANADIAN REGULATIONS

WHMIS 2015 Classification: Same as OSHA GHS Classification.

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STATE REGULATIONS

California Proposition 65: This product does not contain materials known to the state of California to cause cancer, birth defects, and other reproductive harm.
The components of this product may be included on the various state hazardous materials lists noted below.
California Hazardous Substances List/Permissible Exposure List
Connecticut Permissible Exposure Limits
Delaware List of Chemicals and RQs
Hawaii Permissible Exposure Limits
Idaho Toxic Air Pollutants
Maryland Toxic Air Pollutants for Existing Sources
Massachusetts Hazardous Substances List
Michigan Permissible Exposure Limits
Minnesota Hazardous Substances
New Jersey RTK Hazardous Substances List/TCPA Extremely Hazardous Substances List
New York List of Hazardous Substances
Pennsylvania Hazardous Substances List
Rhode Island Toxic Air Contaminants
Tennessee Permissible Exposure Limits
Vermont Hazardous Air Contaminants/Permissible Exposure Limits
Washington Permissible Exposure Limits for Airborne Contaminants.

Note: Entries under Section 15 are not intended to be all inclusive of Federal and State laws and regulations. Please consult the appropriate agencies for further clarification of any requirements.

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16. OTHER INFORMATION

This SDS conforms to the OSHA Hazard Communication Standard 1910.1200 published in the Federal Register March 26, 2012

MEDICAL EMERGENCIES:	FOR ANY OTHER INFORMATION:
Call CHEMTREC 24 hours a Day for emergency information 800-424-9300	**KEX TIRE REPAIR 119 Rockland Ave. NORTHVALE, NJ 07647 201-256-8200**

NOTICE: KEX TIRE REPAIR believes that the information contained on this safety data sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive, nor fully adequate in every circumstance. Also, the suggestions should not be confused with, nor followed in violation of, applicable laws, regulations, rules or insurance requirements.

NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.

Date of Issue/Revision: January 24, 2017

SAFETY DATA SHEET

17 Shepard Street • Lawrence, MA 01843 USA
+1.978.683.9411
www.keypolymer.com

Issuing Date 02-Jun-2015 **Revision Date** 18-Sep-2023 **Revision Number** 6

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier
Product Name KEY FP100A

Other means of identification
Product Code(s) FP100A
UN/ID no. UN3082
Product Technology Epoxy A side
Document Crack Filler A
None
Epoxy A side. FOR INDUSTRIAL USE ONLY.
Restrictions on use: Do not use this product for any use other than intended
Manufacturer Address
Key Polymer Holdings, LLC
17 Shepard Street
Lawrence, MA 01843, USA
Company Phone Number 978-683-9411 (8AM - 5PM EST) (M-F)
Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours) CCN 12410
Chemtrec International Phone +1 703 527-3887

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Reproductive toxicity	Category 1B

Emergency Overview

DANGER

Hazard statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction

May damage fertility or the unborn child



Appearance Viscous Grey **Physical state** Paste **Odor** Solvent

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust, fumes, or vapors
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves, protective clothing, eye protection, face protection

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see .? on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

Not applicable
Other Information

May be harmful in contact with skin, Toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Substance

Chemical Family Epoxy A Side
Chemical nature Epoxy resin mixture.

Chemical name	CAS No.	Weight-%	Trade secret
Bisphenol A diglycidyl ether resin	25068-38-6	50 - 85	*
Calcium carbonate	1317-65-3	5 - 15	*
2-Butanone	78-93-3	1 - 5	*
1-Methyl-2-pyrrolidinone	872-50-4	0.1 - 0.9	*

Calcium carbonate, when encapsulated in a polymer, is not expected to pose a respirable health hazard when processed under

normal conditions of use.
* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

General advice Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion Not an expected route of exposure. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Self-protection of the first aider First Aider: Pay attention to self-protection. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. May cause redness and tearing of the eyes. Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media
Use CO2, dry chemical, or foam

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous combustion products Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous Decomposition Products for additional information.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ventilate affected area. Extremely slippery when spilled. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information Use personal protective equipment as required.

For Emergency Responders Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information. Do not allow into any sewer, on the ground or into any body of water.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store and handle away from heat, flames and oxidizing materials. Keep out of the reach of children.

Incompatible materials Strong oxidizing agents. Strong acids. Strong bases.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium carbonate 1317-65-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
2-Butanone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m³ (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m³ (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m³	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m³ STEL: 300 ppm STEL: 885 mg/m³

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Paste		
Appearance	Viscous	**Odor**	Solvent
Color	Grey	**Odor threshold**	N/A

Property	**Values**	**Remarks • Method**
pH	N/A	
Melting point / freezing point	N/A	
Boiling point / boiling range	> 148 °C	
Flash point	77.5 °C	Setaflash Closed Tester
Evaporation rate	N/A	
Flammability (solid, gas)	N/A	
Flammability Limit in Air		
Upper flammability limit:	N/A	
Lower flammability limit:	N/A	
Vapor pressure	N/A	
Vapor density	Hevier than air	
Relative density	1.2	
Water solubility	Negligible	
Solubility in other solvents	N/A	
Partition coefficient	N/A	
Autoignition temperature	N/A	
Decomposition temperature	N/A	
Kinematic viscosity	100000 cSt	
Dynamic viscosity	120000 cps @ 25° C	
Explosive properties	Not an explosive	
Oxidizing properties	N/A	

Other Information

Softening point	N/A
Molecular weight	N/A
VOC Content (%)	N/A
Liquid Density	10.0 pounds/gallon
Bulk density	N/A

10. Stability and Reactivity

Reactivity

No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Hazardous polymerization None under normal processing.

Conditions to avoid
Extremes of temperature and direct sunlight. Heat, flames and sparks. Mixture with or exposure to incompatible materials.

Incompatible materials
Strong oxidizing agents. Strong acids. Strong bases.

Hazardous decomposition products
Carbon monoxide. Carbon Dioxide (CO2). Aldehydes. Aromatic hydrocarbons. May emit toxic fumes under fire conditions. Nitrogen oxides (NOx).

11. Toxicological Information

Information on likely routes of exposure

Product Information The product has not been tested

Inhalation Remove to fresh air. May cause irritation of respiratory tract.

Eye contact Vapor may cause irritation. Avoid contact with eyes.

Skin contact Avoid contact with skin. Causes skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Not an expected route of exposure. May be harmful if swallowed.

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Bisphenol A diglycidyl ether resin 25068-38-6	= 11400 mg/kg (Rat)	-	-
2-Butanone 78-93-3	= 2483 mg/kg (Rat)	= 5000 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h
1-Methyl-2-pyrrolidinone 872-50-4	= 3914 mg/kg (Rat)	= 8 g/kg (Rabbit)	> 5.1 mg/L (Rat) 4 h

Information on toxicological effects

N/A.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Irritating to skin. Repeated or prolonged contact may cause skin irritation and dermatitis.
Serious eye damage/eye irritation Irritating to eyes.
Irritation Irritating to eyes and skin.
Sensitization May cause sensitization of susceptible persons. Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Germ cell mutagenicity N/A.
Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity Product is or contains a chemical which is a known or suspected reproductive hazard. May cause harm to the unborn child. May impair fertility.
STOT - single exposure N/A.
STOT - repeated exposure Pre-existing diseases of the liver may result in increased susceptibility to the toxicity of excessive exposure.
Chronic Toxicity Repeated contact may cause allergic reactions in very susceptible persons.
Target organ effects Liver.
Aspiration hazard N/A.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 10,558.20 mg/kg
ATEmix (dermal) 3,088.60 mg/kg mg/l
ATEmix (inhalation-vapor) 21.3125 mg/l

12. Ecological Information

Bisphenol A epoxy resin.

Ecotoxicity

Toxic to aquatic life with long lasting effects
0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
2-Butanone 78-93-3		3130 - 3320: 96 h Pimephales promelas mg/L LC50 flow-through	4025 - 6440: 48 h Daphnia magna mg/L EC50 Static 5091: 48 h Daphnia magna mg/L EC50 520: 48 h Daphnia magna mg/L EC50
1-Methyl-2-pyrrolidinone 872-50-4	500: 72 h Desmodesmus subspicatus mg/L EC50	1072: 96 h Pimephales promelas mg/L LC50 static 1400: 96 h Poecilia reticulata mg/L LC50 static 832: 96 h Lepomis macrochirus mg/L LC50 static	4897: 48 h Daphnia magna mg/L EC50

Persistence and degradability
N/A

Chemical name	Partition coefficient
2-Butanone 78-93-3	0.3
1-Methyl-2-pyrrolidinone 872-50-4	-0.46

Other adverse effects
N/A

13. Disposal Considerations

Waste treatment methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
2-Butanone 78-93-3	U159	Included in waste streams: F005, F039	200.0 mg/L regulatory level	U159

Chemical name	California Hazardous Waste Status
2-Butanone 78-93-3	Toxic mixture of acetone, methyl acetate, and methyl alcohol Ignitable mixture of acetone, methyl acetate, and methyl alcohol

14. Transport Information

Note: A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards (IMDG 2.10.2.7)

DOT

UN/ID no.	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packing Group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
Marine pollutant	Bisphenol A epoxy resin.
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Bisphenol A epoxy resin),9, III, Marine pollutant
Emergency Response Guide Number	171

ICAO (air)

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
Special Provisions	A97, A158, A197, A215
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., (Bisphenol A epoxy resin), 9, III

IATA

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A97, A158, A197, A215
Description	UN3082 Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A epoxy resin), 9, III

IMDG

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
EmS-No.	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	Bisphenol A epoxy resin
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. , (Bisphenol A epoxy resin), 9, III, Marine pollutant

15. Regulatory Information

International Inventories

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No.	Weight-%	SARA 313 - Threshold Values %
1-Methyl-2-pyrrolidinone - 872-50-4	872-50-4	0.1 - 0.9	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
2-Butanone 78-93-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
1-Methyl-2-pyrrolidinone - 872-50-4	Developmental
Silicon dioxide - 14808-60-7	Carcinogen
Glycidyl phenyl ether - 122-60-1	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Calcium carbonate 1317-65-3	X	X	X
2-Butanone 78-93-3	X	X	X
1-Methyl-2-pyrrolidinone 872-50-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

Prepared By	Key Polymer Corp Compliance
Issuing Date	02-Jun-2015
Revision Date	18-Sep-2023

Revision Note

N/A

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

17 Shepard Street • Lawrence, MA 01843 USA
+1.978.683.9411
www.keypolymer.com

Issuing Date 02-Jun-2015 **Revision Date** 18-Sep-2023 **Revision Number** 5

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier
Product Name KEY FP100B

Other means of identification
Product Code(s) FP100B
Product Technology Epoxy B side
None
Curing chemical. FOR INDUSTRIAL USE ONLY.
Restrictions on use: Do not use this product for any use other than intended
Manufacturer Address
Key Polymer Holdings, LLC
17 Shepard Street
Lawrence, MA 01843, USA
Company Phone Number 978-683-9411 (8AM - 5PM EST) (M-F)
Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours) CCN 12410
Chemtrec International Phone +1 703 527-3887

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1A
Carcinogenicity	Category 1A

Emergency Overview

DANGER

Hazard statements
Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction
May cause cancer



Appearance Viscous Light Brown **Physical state** Paste **Odor** Amine

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust, fumes, or vapors
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

Not applicable
Other Information

May be harmful if swallowed, Causes mild skin irritation, Toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Substance

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Family Epoxy B Side, Curing Agent

Chemical name	CAS No.	Weight-%	Trade secret
Amine mixture	Proprietary	30 - 50	*
Calcium carbonate	1317-65-3	20 - 30	*
Cellulose microcrystalline	9004-34-6	1 - 5	*
Tris(dimethylaminomethyl)phenol	90-72-2	1 - 5	*
Silicon dioxide	14808-60-7	0.1 - 0.5	*

Calcium carbonate, when encapsulated in a polymer, is not expected to pose a respirable health hazard when processed under normal conditions of use.
* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

General advice Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation persists.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Rinse mouth. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.

Self-protection of the first aider First Aider: Pay attention to self-protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction. Burning sensation. Itching. Rashes.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media
Foam, Dry Chemical, Carbon Dioxide (CO2);

Unsuitable extinguishing media Water reactive.

Specific hazards arising from the chemical
Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Substance will react with water (some violently) releasing flammable, toxic or corrosive gases and runoff. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous combustion products Carbon oxides; Nitrogen oxides (NOx).

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information Use personal protective equipment as required.

For Emergency Responders Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store and handle away from heat, flames and oxidizing materials. Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children.

Incompatible materials Acids; Bases; Strong oxidizing agents; Water. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium carbonate 1317-65-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Cellulose microcrystalline 9004-34-6	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust TWA: 1 mg/m³

		respirable fraction (vacated) TWA: 5 mg/m³ (vacated) STEL: 10 mg/m³	
Silicon dioxide 14808-60-7	TWA: 0.025 mg/m³ respirable particulate matter	TWA: 50 µg/m³ TWA: 50 µg/m³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m³ respirable dust : (250)/(%SiO2 + 5) mppcf TWA respirable fraction : (10)/(%SiO2 + 2) mg/m³ TWA respirable fraction	IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Paste		
Appearance	Viscous	**Odor**	Amine
Color	Light Brown	**Odor threshold**	N/A

Property	**Values**	**Remarks • Method**
pH	N/A	
Melting point / freezing point	N/A	
Boiling point / boiling range	> 150 °C	
Flash point	155.5 °C	Setaflash Closed Tester
Evaporation rate	Slower than n-butyl acetate	
Flammability (solid, gas)	N/A	
Flammability Limit in Air		
Upper flammability limit:	N/A	
Lower flammability limit:	N/A	
Vapor pressure	N/A	
Vapor density	Heavier than air	
Relative density	1.2	
Water solubility	Negligible	
Solubility in other solvents	N/A	
Partition coefficient	N/A	
Autoignition temperature	N/A	
Decomposition temperature	N/A	

Kinematic viscosity	71667 cSt
Dynamic viscosity	86000 cps @ 25° C
Explosive properties	Not an explosive
Oxidizing properties	N/A

Other Information

Softening point	N/A
Molecular weight	N/A
VOC Content (%)	N/A
Liquid Density	10.0 pounds/gallon
Bulk density	N/A

10. Stability and Reactivity

Reactivity

No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Keep out of reach of children. Avoid moisture. Incompatible materials. Heat, flames and sparks.

Incompatible materials
Acids; Bases; Strong oxidizing agents; Water. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Hazardous decomposition products
Carbon oxides; Nitrogen oxides (NOx). Aldehydes. Calcium oxides. Nitric acid. Nitrosamines if product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Ammonia. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. Toxicological Information

Information on likely routes of exposure

Product Information The product has not been tested.

Inhalation May cause irritation of respiratory tract.

Eye contact Causes serious eye damage.

Skin contact Causes skin irritation. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Do NOT taste or swallow. Not an expected route of exposure. May be harmful if swallowed.

Component Information Caution - This preparation contains a substance not yet fully tested

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Amine mixture	-	> 2000 mg/kg (Rat)	-
Cellulose microcrystalline 9004-34-6	> 5 g/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5800 mg/m³ (Rat) 4 h
Tris(dimethylaminomethyl)phenol 90-72-2	= 1200 mg/kg (Rat)	= 1280 mg/kg (Rat)	-

Information on toxicological effects

N/A.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Irritating to skin. Repeated or prolonged contact may cause skin irritation and dermatitis.
Serious eye damage/eye irritation Risk of serious damage to eyes.
Irritation Irritating to eyes and skin.
Corrosivity Risk of serious damage to eyes.
Sensitization May cause sensitization by skin contact.
Germ cell mutagenicity N/A.
Carcinogenicity Silicon Dioxide (CAS 14808-60-7) is a naturally occurring substance that poses low respirable carcinogen risk when encapsulated in a polymeric liquid. If sanding or grinding finished product, wear appropriate personal protective equipment for respirable dust hazards. Cellulose Microcrystalline (CAS 9004-34-6) is a naturally occurring substance that poses very low respirable carcinogen risk when encapsulated in a polymeric liquid.

Chemical name	ACGIH	IARC	NTP	OSHA
Cellulose microcrystalline 9004-34-6		Group 1	Known	X
Silicon dioxide 14808-60-7	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity N/A.
STOT - single exposure N/A.
STOT - repeated exposure N/A.
Chronic Toxicity Repeated contact may cause allergic reactions in very susceptible persons.
Aspiration hazard N/A.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 2,566.80 mg/kg
ATEmix (dermal) 1,966.10 mg/kg
ATEmix (inhalation-dust/mist) 6.5490 mg/l

12. Ecological Information

Ecotoxicity

Toxic to aquatic life with long lasting effects

Chemical name	Algae/aquatic plants	Fish	Crustacea
Amine mixture		7.07: 96 h Danio rerio mg/L LC50 semi-static with one renewal at 48 hours	

Persistence and degradability
N/A

Other adverse effects
N/A
Ozone depletion potential (ODP) N/A

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13. Disposal Considerations

Waste treatment methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

14. Transport Information

Note: A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards.

DOT Not regulated

ICAO (air) Not regulated

IATA

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A97, A158, A197
Description	UN3082 Environmentally hazardous substance, liquid, n.o.s. (Amine mixture), 9, III

IMDG

UN/ID no.	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
EmS-No.	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	Amine mixture
Description	UN3082 Environmentally hazardous substance, liquid, n.o.s. (Amine mixture), 9, III, Marine pollutant

15. Regulatory Information

International Inventories

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

California Proposition 65
This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Cellulose microcrystalline - 9004-34-6	Carcinogen
Silicon dioxide - 14808-60-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Calcium carbonate 1317-65-3	X	X	X
Cellulose microcrystalline 9004-34-6	X	X	X
Silicon dioxide 14808-60-7	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

Prepared By	Key Polymer Corp Compliance
Issuing Date	02-Jun-2015
Revision Date	18-Sep-2023

Revision Note

N/A

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

KEY POLYMER CORPORATION

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Safety Data Sheet

Issue Date 02-Jun-2015 **Revision Date** 17-Jul-2015 **Version** 6

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product name KEY QP300A

Other Means of Identification

Product Code QP300A
Product Technology Epoxy A side
Document Key Quick Patch Part A
None
Epoxy A side. FOR INDUSTRIAL USE ONLY.
Restrictions on use: Do not use this product for any use other than intended
Manufacturer Address
Key Polymer Corporation
17 Shepard Street
Lawrence, MA 01843, USA
Company Phone Number 978-683-9411 (8AM - 5PM EST) (M-F)
Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours)
Chemtrec International Phone +1 703 527-3887

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Reproductive Toxicity	Category 1B

EMERGENCY OVERVIEW

DANGER

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May damage fertility or the unborn child



Appearance Paste White **Physical State** Paste/Gel **Odor** Solvent

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust, fumes, or vapors
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves, protective clothing, eye protection, face protection

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local/regional/international regulations

Hazards Not Otherwise Classified (HNOC)

Other Information

Toxic to aquatic life with long lasting effects
11.24425812% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

Chemical Family Epoxy A Side
Chemical nature Epoxy resin mixture.

Chemical Name	CAS No	Weight-%	Trade secret
Bisphenol A diglycidyl ether resin	25068-38-6	60 - 80	*
Titanium dioxide	13463-67-7	10 - 20	*
Calcium carbonate	1317-65-3	5 - 10	*
2-Butanone	78-93-3	1 - 2	*
1-Methyl-2-pyrrolidinone	872-50-4	0.1 - 0.5	*

Calcium carbonate, when encapsulated in a polymer, is not expected to pose a respirable health hazard when processed under normal conditions of use.
* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

FIRST AID MEASURES

General Advice Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion Not an expected route of exposure. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Self-Protection of the First Aider First Aider: Pay attention to self-protection. Use personal protective equipment as required.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms No information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media

Use CO2, dry chemical, or foam

Unsuitable Extinguishing Media Caution: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising From the Chemical

Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous Combustion Products Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous Decomposition Products for additional information.

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Ventilate affected area. Extremely slippery when spilled.

Other Information Use personal protective equipment as required.

For Emergency Responders Use personal protective equipment as required.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information. Do not allow into any sewer, on the ground or into any body of water.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for Safe Handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store and handle away from heat, flames and oxidizing materials.

Incompatible Materials Strong oxidizing agents. Strong acids. Strong bases. Halogens. Chlorinated compounds.

8. Exposure Controls/Personal Protection

Control Parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³
Calcium carbonate 1317-65-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
2-Butanone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m³ (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m³ (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m³	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m³ STEL: 300 ppm STEL: 885 mg/m³

Appropriate Engineering Controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual Protection Measures, Such As Personal Protective Equipment

Eye/Face Protection Splash Goggles.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be

provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical State	Paste/Gel		
Appearance	Paste	**Odor**	Solvent
Color	White	**Odor Threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting Point/Freezing Point	No information available	
Boiling Point/Boiling Range	> 100 °C	
Flash Point	84 °C	Setaflash Closed Tester
Evaporation Rate	Slower than n-butyl acetate	
Flammability (Solid, Gas)	No information available	
Flammability Limits in Air		
Upper Flammability Limits	No information available	
Lower Flammability Limit	No information available	
Vapor Pressure	No information available	
Vapor Density	Heavier than air	
Specific Gravity	1.225	
Water Solubility	Immiscible in water	
Solubility in Other Solvents	No information available	
Partition Coefficient	No information available	
Autoignition Temperature	No information available	
Decomposition Temperature	No information available	
Kinematic Viscosity	No information available	
Dynamic Viscosity	20,000 cps @ 25° C	
Explosive Properties	Not an explosive	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Density	10.2 pounds/gallon
Bulk Density	No information available

10. Stability and Reactivity

Reactivity

No data available

Chemical Stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
Hazardous polymerization does not occur.
hazardous polymerization None under normal processing.

Conditions to Avoid
Keep out of reach of children. Extremes of temperature and direct sunlight. Mixture with or exposure to incompatible materials.
Incompatible Materials
Strong oxidizing agents. Strong acids. Strong bases. Halogens. Chlorinated compounds.
Hazardous Decomposition Products
Carbon monoxide. Carbon Dioxide (CO2). Aldehydes. Aromatic hydrocarbons. Formaldehyde. Diethylamine. May emit toxic fumes

under fire conditions.

11. Toxicological Information

Information on Likely Routes of Exposure

Product Information The product has not been tested

Inhalation No data available.

Eye Contact Severely irritating to eyes. Avoid contact with eyes. Vapor may cause irritation.

Skin Contact Avoid contact with skin. Causes skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Not an expected route of exposure. Harmful if swallowed. May cause adverse liver effects.

Chemical Name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50
Bisphenol A diglycidyl ether resin 25068-38-6	= 11400 mg/kg (Rat)	-	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-
2-Butanone 78-93-3	= 2483 mg/kg (Rat) = 2737 mg/kg (Rat)	= 6480 mg/kg (Rabbit) = 5000 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h
1-Methyl-2-pyrrolidinone 872-50-4	= 3598 mg/kg (Rat)	= 8 g/kg (Rabbit)	= 3.1 mg/L (Rat) 4 h

Information on toxicological effects

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Repeated or prolonged contact may cause skin irritation and dermatitis. Irritating to skin.
Serious eye damage/eye irritation Irritating to eyes.
Irritation Irritating to eyes, respiratory system and skin.
Sensitization May cause sensitization of susceptible persons.
Germ Cell Mutagenicity No information available.
Carcinogenicity Titanium Dioxide (CAS 13463-67-7) is a naturally occurring substance that poses very low respirable carcinogen risk when encapsulated in a polymeric liquid. If sanding or grinding finished product, wear appropriate personal protective equipment for respirable dust hazards.

Chemical Name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7		Group 2B		X

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive Toxicity Product is or contains a chemical which is a known or suspected reproductive hazard. May impair fertility.
STOT - Single Exposure No information available.
STOT - Repeated Exposure Pre-existing diseases of the liver may result in increased susceptibility to the toxicity of excessive exposure.
Chronic Toxicity Repeated contact may cause allergic reactions in very susceptible persons.
Target Organ Effects Liver.
Aspiration Hazard No information available.

Numerical Measures of Toxicity - Product Information

Unknown Acute Toxicity 11.24425812% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document

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ATEmix (oral)	10580 mg/kg
ATEmix (dermal)	314469 mg/kg
ATEmix (inhalation-vapor)	735858 mg/l

12. Ecological Information

Ecotoxicity

No information available
28.2344% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
2-Butanone 78-93-3		3130 - 3320: 96 h Pimephales promelas mg/L LC50 flow-through		520: 48 h Daphnia magna mg/L EC50 5091: 48 h Daphnia magna mg/L EC50 4025 - 6440: 48 h Daphnia magna mg/L EC50 Static
1-Methyl-2-pyrrolidinone 872-50-4	500: 72 h Desmodesmus subspicatus mg/L EC50	832: 96 h Lepomis macrochirus mg/L LC50 static 1072: 96 h Pimephales promelas mg/L LC50 static 1400: 96 h Poecilia reticulata mg/L LC50 static 4000: 96 h Leuciscus idus mg/L LC50 static		4897: 48 h Daphnia magna mg/L EC50

Persistence and Degradability
No information available

Chemical Name	Partition Coefficient
2-Butanone 78-93-3	0.29
1-Methyl-2-pyrrolidinone 872-50-4	-0.46

Other Adverse Effects
No information available

13. Disposal Considerations

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
2-Butanone 78-93-3	U159	Included in waste streams: F005, F039	200.0 mg/L regulatory level	U159

14. Transport Information

Note: A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards.

DOT Not regulated

ICAO (air)

UN/ID no UN3082

Proper Shipping Name	Environmentally Hazardous Substance N.O.S. (Bisphenol A epoxy resin)
Hazard Class	9
Packing group	III
Special Provisions	A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards

IATA

UN/ID no	UN3082
Proper Shipping Name	Environmentally Hazardous substance Liquid N.O.S. (Bisphenol A epoxy resin)
Hazard Class	9
Packing group	III
Special Provisions	A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards

IMDG

UN/ID no	UN3082
Proper Shipping Name	Environmentally Hazardous Substance Liquid N.O.S. (Bisphenol A epoxy resin)
Hazard Class	9
Packing group	III
EmS-No	IMDG code 2.9.3
Special Provisions	A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

15. Regulatory Information

International Inventories

TSCA All components of this product are either exempt or included on the TSCA Inventory in compliance with the Toxic Substances Control Act.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
1-Methyl-2-pyrrolidinone - 872-50-4	872-50-4	0.1 - 0.5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
2-Butanone 78-93-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Titanium dioxide - 13463-67-7	Carcinogen
1-Methyl-2-pyrrolidinone - 872-50-4	Developmental
Silicon dioxide - 14808-60-7	Carcinogen
Glycidyl phenyl ether - 122-60-1	Carcinogen Male Reproductive

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Titanium dioxide 13463-67-7	X	X	X
Calcium carbonate 1317-65-3	X	X	X
2-Butanone 78-93-3	X	X	X
1-Methyl-2-pyrrolidinone 872-50-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

HMIS **Health Hazards** 2 **Flammability** 1 **Physical Hazards** 0 **Personal Protection** X

Prepared by Key Polymer Corp Compliance
Issue Date 02-Jun-2015
Revision Date 17-Jul-2015

Revision note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

17 Shepard Street • Lawrence, MA 01843 USA
+1.978.683.9411
www.keypolymer.com

Issuing Date 08-May-2015 **Revision Date** 18-Sep-2023 **Revision Number** 7

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier
Product Name KEY QP300B

Other means of identification
Product Code(s) QP300B
UN/ID no. UN1760
Product Technology Epoxy B side
Document Key Quick Patch Part B
None
Curing chemical. FOR INDUSTRIAL USE ONLY.
Restrictions on use: Do not use this product for any use other than intended
Manufacturer Address
Key Polymer Holdings, LLC
17 Shepard Street
Lawrence, MA 01843, USA
Company Phone Number 978-683-9411 (8AM - 5PM EST) (M-F)
Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours) CCN 12410
Chemtrec International Phone +1 703 527-3887

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 2

Emergency Overview

DANGER

Hazard statements
Harmful if swallowed

Harmful in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Suspected of damaging fertility or the unborn child



Appearance Paste White **Physical state** Paste/Gel **Odor** Amine

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust, fumes, or vapors
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local/regional/international regulations

Hazards Not Otherwise Classified (HNOC)

Not applicable
Other Information

Very toxic to aquatic life with long lasting effects, Very toxic to aquatic life

3. Composition/Information on Ingredients

Substance

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Family Epoxy B Side, Curing Agent

Chemical name	CAS No.	Weight-%	Trade secret
Aliphatic Polyamine	Proprietary	30 - 40	*
Phenol, 4-nonyl-, branched	84852-15-3	20 - 25	*
Titanium dioxide	13463-67-7	20 - 25	*
Diethylenetriamine	111-40-0	1 - 2	*
Aluminium hydroxide	21645-51-2	1 - 5	*

* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

General advice Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation persists.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Rinse mouth. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.

Self-protection of the first aider First Aider: Pay attention to self-protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction. Burning sensation. Itching. Rashes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media
Foam, Dry Chemical, Carbon Dioxide (CO2);

Unsuitable extinguishing media Water reactive.

Specific hazards arising from the chemical
Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Substance will react with water (some violently) releasing flammable, toxic or corrosive gases and runoff. Cool closed containers

exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous combustion products Carbon oxides; Nitrogen oxides (NOx).

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Attention!. Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information Use personal protective equipment as required.

For Emergency Responders Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Transfer and handle product only in closed systems. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from other materials. Keep out of the reach of children.

Incompatible materials Acids; Bases; Strong oxidizing agents; Water. Reactive metals (e.g. sodium, calcium, zinc, etc.).

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure

limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³ TWA: 2.4 mg/m³ CIB 63 fine TWA: 0.3 mg/m³ CIB 63 ultrafine, including engineered nanoscale
Diethylenetriamine 111-40-0	TWA: 1 ppm S*	(vacated) TWA: 1 ppm (vacated) TWA: 4 mg/m³	TWA: 1 ppm TWA: 4 mg/m³
Aluminium hydroxide 21645-51-2	TWA: 1 mg/m³ respirable particulate matter	-	-

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands thoroughly after handling.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Paste/Gel		
Appearance	Paste	**Odor**	Amine
Color	White	**Odor threshold**	N/A

Property	Values	Remarks • Method
pH	N/A	
Melting point / freezing point	N/A	
Boiling point / boiling range	> 150 °C	
Flash point	156 °C	Setaflash Closed Tester
Evaporation rate	Slower than n-butyl acetate	
Flammability (solid, gas)	N/A	
Flammability Limit in Air		
Upper flammability limit:	N/A	
Lower flammability limit:	N/A	
Vapor pressure	N/A	
Vapor density	Heavier than air	
Relative density	1.225	
Water solubility	Negligible	
Solubility in other solvents	N/A	
Partition coefficient	N/A	

Autoignition temperature	N/A
Decomposition temperature	N/A
Kinematic viscosity	N/A
Dynamic viscosity	18,000 cps @ 25° C
Explosive properties	Not an explosive
Oxidizing properties	N/A

Other Information

Softening point	N/A
Molecular weight	N/A
VOC Content (%)	N/A
Liquid Density	10.2 pounds/gallon
Bulk density	N/A

10. Stability and Reactivity

Reactivity

No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Avoid moisture. Incompatible materials.

Incompatible materials
Acids; Bases; Strong oxidizing agents; Water. Reactive metals (e.g. sodium, calcium, zinc, etc.).

Hazardous decomposition products
Carbon oxides; Nitrogen oxides (NOx). Nitric acid. Ammonia. Sulfur oxides. Hydrogen sulfide. Formaldehyde. May emit toxic fumes under fire conditions.

11. Toxicological Information

Information on likely routes of exposure

Product Information The product has not been tested.

Inhalation Remove to fresh air. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye contact Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness.

Skin contact Corrosive. Causes burns. Harmful in contact with skin. May be absorbed through the skin in harmful amounts. Avoid contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Not an expected route of exposure. Harmful if swallowed. Can burn mouth, throat, and stomach. Do NOT taste or swallow.

Component Information Caution - This preparation contains a substance not yet fully tested

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Aliphatic Polyamine	= 2140 µL/kg (Rat)	= 866 mg/kg (Rabbit)	-

Phenol, 4-nonyl-, branched 84852-15-3	= 1300 mg/kg (Rat)	= 2000 mg/kg (Rabbit)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Diethylenetriamine 111-40-0	= 1080 mg/kg (Rat)	= 672 mg/kg (Rabbit)	= 70 mg/L (Rat) 4 h
Aluminium hydroxide 21645-51-2	> 5000 mg/kg (Rat)	-	-

Information on toxicological effects

N/A.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Repeated or prolonged contact may cause skin irritation and dermatitis. Causes burns.
Serious eye damage/eye irritation Risk of serious damage to eyes.
Irritation Causes severe irritation and or burns.
Corrosivity Risk of serious damage to eyes. Causes burns.
Sensitization May cause sensitization by skin contact. Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Germ cell mutagenicity N/A.
Carcinogenicity Titanium Dioxide (CAS 13463-67-7) is a naturally occurring substance that poses very low respirable carcinogen risk when encapsulated in a polymeric liquid. If sanding or grinding finished product, wear appropriate personal protective equipment for respirable dust hazards.

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7		Group 2B		X

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Category 2: Substances which should be regarded as if they impair fertility in humans.
STOT - single exposure May cause disorder and damage to the; Skin, Lungs, Eyes, Central nervous system.
STOT - repeated exposure May cause disorder and damage to the; Kidney, Skin.
Target organ effects Skin, Eyes, Blood, Liver, Lungs, Central nervous system.
Aspiration hazard N/A.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 928.40 mg/kg
ATEmix (dermal) 1,358.00 mg/kg
ATEmix (inhalation-dust/mist) 98.80 mg/l

12. Ecological Information

4-Nonylphenol, branched.

Ecotoxicity

Very toxic to aquatic life with long lasting effects

Chemical name	Algae/aquatic plants	Fish	Crustacea
Aliphatic Polyamine	495: 72 h Pseudokirchneriella subcapitata mg/L EC50	1950 - 2460: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Poecilia reticulata mg/L LC50 semi-static 100: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	32: 48 h Daphnia magna mg/L EC50

Phenol, 4-nonyl-, branched 84852-15-3	0.16 - 0.72: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.36 - 0.48: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 1.3: 72 h Desmodesmus subspicatus mg/L EC50	0.135: 96 h Pimephales promelas mg/L LC50 flow-through 0.1351: 96 h Lepomis macrochirus mg/L LC50 flow-through	0.14: 48 h Daphnia magna mg/L EC50
Diethylenetriamine 111-40-0	1164: 72 h Pseudokirchneriella subcapitata mg/L EC50 345.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 592: 96 h Desmodesmus subspicatus mg/L EC50	1014: 96 h Poecilia reticulata mg/L LC50 semi-static 248: 96 h Poecilia reticulata mg/L LC50 static	16: 48 h Daphnia magna mg/L EC50

Persistence and degradability

N/A

Chemical name	Partition coefficient
Aliphatic Polyamine	-1.48
Diethylenetriamine 111-40-0	-1.3

Other adverse effects

N/A

Ozone depletion potential (ODP) N/A

13. Disposal Considerations

Waste treatment methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number D002, U122 D001, U019

Chemical name	California Hazardous Waste Status
Diethylenetriamine 111-40-0	Toxic

14. Transport Information

DOT

UN/ID no. UN1760
Proper shipping name CORROSIVE LIQUIDS, N.O.S.
Hazard Class 8
Packing Group III
Special Provisions IB3, T7, TP1, TP28
Marine pollutant 4-Nonylphenol, branched.
Description UN1760 CORROSIVE LIQUIDS, N.O.S., (Aliphatic Polyamine, 4-Nonylphenol, branched),8, III
Emergency Response Guide Number 154

ICAO (air)

UN/ID no. UN1760
Proper shipping name Corrosive liquid, n.o.s.
Hazard Class 8

Packing Group	III
Special Provisions	A3
Description	UN1760, Corrosive liquid, n.o.s. (Aliphatic Polyamine, 4-Nonylphenol, branched),8, III

IATA

UN/ID no.	UN1760
Proper shipping name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
ERG Code	8L
Special Provisions	A3, A803
Description	UN1760 Corrosive liquid, n.o.s. (Aliphatic Polyamine, 4-Nonylphenol, branched), 8, III

IMDG

UN/ID no.	UN1760
Proper shipping name	CORROSIVE LIQUID, N.O.S.
Hazard Class	8
Packing Group	III
EmS-No.	F-A, S-B
Special Provisions	223, 274
Marine pollutant	4-Nonylphenol, branched
Description	UN1760 CORROSIVE LIQUID, N.O.S. (Aliphatic Polyamine, 4-Nonylphenol, branched), 8, III, Marine pollutant

15. Regulatory Information

International Inventories

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Phenol, 4-nonyl-, branched - 84852-15-3	84852-15-3	20 - 25	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level

pertaining to releases of this material

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Titanium dioxide - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Aliphatic Polyamine	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Diethylenetriamine 111-40-0	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

Chronic Hazard Star Legend ** = Chronic Health Hazard*

Prepared By Key Polymer Corp Compliance
Issuing Date 08-May-2015
Revision Date 18-Sep-2023

Revision Note

N/A

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

A04418007

Section 1. Identification

Product name : Industrial WORK DAY™ Enamel Spray Paint
Gray Primer

Product code : A04418007

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Paint or paint related material.

Manufacturer : Krylon Products Group
101 Prospect Avenue NW
Cleveland, OH 44115

Emergency telephone number of the company : US/Canada: (800) 424-9300
Mexico: CHEMTREC Mexico 800-681-9531. Available 24 hours and 365 days per year

Product Information Telephone Number : US/Canada: (800) 247-3266
Mexico: Not Available

Transportation Emergency Telephone Number : US/Canada: (800) 424-9300
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : AEROSOLS - Category 1
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 14.3% (oral), 18.8% (dermal), 23.2% (inhalation)

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Extremely flammable aerosol. Pressurized container: may burst if heated.
Causes skin irritation.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure. (lungs)

Section 2. Hazards identification

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Do not pierce or burn, even after use.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	Identifiers
Acetone	≥25 - ≤50	67-64-1
Propane	≥10 - ≤25	74-98-6
Butane	≥10 - ≤25	106-97-8
Isobutyl Acetate	≤10	110-19-0
Talc	≤10	14807-96-6
Toluene	≤5	108-88-3
Titanium Dioxide	≤3	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Flammable aerosol.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	CAS #	Exposure limits
Acetone	67-64-1	**ACGIH TLV (United States, 1/2024)** A4. TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm. **NIOSH REL (United States, 10/2020)** TWA 10 hours: 250 ppm. TWA 10 hours: 590 mg/m³. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 1000 ppm. TWA 8 hours: 2400 mg/m³.
Propane	74-98-6	**ACGIH TLV (United States, 1/2024)** Oxygen depletion [asphyxiant] , Explosive potential. **NIOSH REL (United States, 10/2020)** TWA 10 hours: 1000 ppm. TWA 10 hours: 1800 mg/m³. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 1000 ppm. TWA 8 hours: 1800 mg/m³.
Butane	106-97-8	**ACGIH TLV (United States, 1/2024) [Butane]** Explosive potential. STEL 15 minutes: 1000 ppm. **NIOSH REL (United States, 10/2020)** TWA 10 hours: 800 ppm. TWA 10 hours: 1900 mg/m³.
Isobutyl Acetate	110-19-0	**ACGIH TLV (United States, 1/2024) [Butyl acetates]** STEL 15 minutes: 150 ppm. TWA 8 hours: 50 ppm. **NIOSH REL (United States, 10/2020)** TWA 10 hours: 150 ppm. TWA 10 hours: 700 mg/m³. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 150 ppm. TWA 8 hours: 700 mg/m³.
Talc	14807-96-6	**ACGIH TLV (United States, 1/2024)** A4. TWA 8 hours: 2 mg/m³. Form: Respirable fraction. **NIOSH REL (United States, 10/2020)** TWA 10 hours: 2 mg/m³. Form: Respirable fraction.
Toluene	108-88-3	**ACGIH TLV (United States, 1/2024)** A4. Ototoxicant. TWA 8 hours: 20 ppm. **OSHA PEL Z2 (United States, 2/2013)** TWA 8 hours: 200 ppm. CEIL: 300 ppm. AMP 10 minutes: 500 ppm. **NIOSH REL (United States, 10/2020)** TWA 10 hours: 100 ppm. TWA 10 hours: 375 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 560 mg/m³.
Titanium Dioxide	13463-67-7	**ACGIH TLV (United States, 1/2024)** A3.

		TWA 8 hours: 2.5 mg/m³. Form: respirable fraction, finescale particles. **NIOSH REL (United States, 10/2020)** NIA. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 15 mg/m³. Form: Total dust.

Occupational exposure limits (Canada)

Ingredient name	CAS #	Exposure limits
acetone	67-64-1	**CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 750 ppm. TWA 8 hours: 500 ppm. **CA British Columbia Provincial (Canada, 9/2024)** TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm. **CA Quebec Provincial (Canada, 2/2024)** TWAEV 8 hours: 250 ppm. STEV 15 minutes: 500 ppm. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 1200 mg/m³. OEL 15 minutes: 1800 mg/m³. OEL 8 hours: 500 ppm. OEL 15 minutes: 750 ppm.
Normal propane	74-98-6	**CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 1250 ppm. TWA 8 hours: 1000 ppm. **CA British Columbia Provincial (Canada, 9/2024)** Oxygen depletion [asphyxiant] , Explosive potential. **CA Ontario Provincial (Canada, 6/2019)** Oxygen depletion [asphyxiant] , Explosive potential. **CA Quebec Provincial (Canada, 2/2024)** Oxygen depletion [asphyxiant] , Explosive potential. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 1000 ppm.
Butane	106-97-8	**CA Saskatchewan Provincial (Canada, 4/2021) [Aliphatic hydrocarbon gases, Alkane [C1-C4]]** STEL 15 minutes: 1250 ppm. TWA 8 hours: 1000 ppm. **CA Saskatchewan Provincial (Canada, 4/2021) [Butane]** STEL 15 minutes: 1250 ppm. TWA 8 hours: 1000 ppm. **CA British Columbia Provincial (Canada, 9/2024) [butane, all isomers]** Explosive potential. STEL 15 minutes: 1000 ppm. **CA Ontario Provincial (Canada, 6/2019)**

		[Butane, All isomers] Explosive potential. STEL 15 minutes: 1000 ppm. **CA Quebec Provincial (Canada, 2/2024)** TWAEV 8 hours: 800 ppm. TWAEV 8 hours: 1900 mg/m³. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 1000 ppm.
Isobutyl acetate	110-19-0	**CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 188 ppm. TWA 8 hours: 150 ppm. **CA British Columbia Provincial (Canada, 9/2024) [butyl acetate, all isomers]** STEL 15 minutes: 150 ppm. TWA 8 hours: 50 ppm. **CA Ontario Provincial (Canada, 6/2019) [butyl acetates, all isomers]** STEL 15 minutes: 150 ppm. TWA 8 hours: 50 ppm. **CA Quebec Provincial (Canada, 2/2024) [butyl acetates]** STEV 15 minutes: 150 ppm. TWAEV 8 hours: 50 ppm. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 150 ppm. OEL 8 hours: 713 mg/m³.
talc (none asbestiform)	14807-96-6	**CA Saskatchewan Provincial (Canada, 4/2021)** TWA 8 hours: 2 mg/m³. Form: respirable fraction. **CA British Columbia Provincial (Canada, 4/2024)** TWA 8 hours: 2 mg/m³. Form: Respirable. Notes: the value is for particulate matter containing no asbestos and less than 1% crystalline silica. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 2 mg/m³. Form: Respirable particulate matter.. TWA 8 hours: 2 fibers/cm³. **CA Quebec Provincial (Canada, 2/2024)** TWAEV 8 hours: 2 mg/m³. Form: respirable aerosol fraction. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 2 mg/m³. Form: Respirable particulate.
toluene	108-88-3	**CA Saskatchewan Provincial (Canada, 4/2021)** Absorbed through skin. STEL 15 minutes: 60 ppm. TWA 8 hours: 50 ppm. **CA British Columbia Provincial (Canada, 9/2024)** Repr. TWA 8 hours: 20 ppm. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 20 ppm. **CA Quebec Provincial (Canada, 2/2024)** Ototoxicant.

		TWAEV 8 hours: 20 ppm. **CA Alberta Provincial (Canada, 3/2023)** Absorbed through skin. OEL 8 hours: 50 ppm. OEL 8 hours: 188 mg/m³.

Occupational exposure limits (Mexico)

Ingredient name	CAS #	Exposure limits
Acetone	67-64-1	**NOM-010-STPS-2014 (Mexico, 4/2016)** A4. TWA 8 hours: 500 ppm. STEL 15 minutes: 750 ppm.
Isobutyl Acetate	110-19-0	**NOM-010-STPS-2014 (Mexico, 4/2016)** TWA 8 hours: 150 ppm.
Toluene	108-88-3	**NOM-010-STPS-2014 (Mexico, 4/2016)** A4. TWA 8 hours: 20 ppm.

Biological exposure indices (United States)

Ingredient name	Exposure indices
Acetone	**ACGIH BEI (United States, 1/2024)** BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.
Toluene	**ACGIH BEI (United States, 1/2024)** BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift. BEI: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift. BEI: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.

Biological exposure indices (Canada)

No exposure indices known.

Biological exposure indices (Mexico)

Ingredient name	Exposure indices
Acetone	**Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012)** BEI: 50 mg/L [non-specific.The determinant is nonspecific, since it can be found after exposure to other chemicals.], acetone [in urine]. Sampling time: at the end of the work shift.
Toluene	**Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012)** BEI: 0.05 mg/L, toluene [in blood]. Sampling time: sample time not specified. BEI: 1.6 g/g creatinine [Basal level.The determinant may be present in the biological

	sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the valu; non-specific.The determinant is nonspecific, since it can be found after exposure to other chemicals.], hippuric acid [in urine]. Sampling time: at the end of the work shift. BEI: 0.5 mg/L [Basal level.The determinant may be present in the biological sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the valu], o-cresol [in urine]. Sampling time: at the end of the work shift.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Gray.

Odor : Not available.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 5.6 (butyl acetate = 1)

Flammability : Flammable aerosol.

Lower and upper explosion limit/flammability limit : Lower: 1%
Upper: 12.8%

Vapor pressure : 101.3 kPa (760 mm Hg)

Relative vapor density : 1.55 [Air = 1]

Relative density : 0.76

Density : 0.76 g/cm³

Solubility(ies) :

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): <20.5 mm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Particle characteristics

Median particle size : Not applicable.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 28.107 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
Acetone	**Rat - Oral - LD50** 5800 mg/kg Toxic effects: Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor
Butane	**Rat - Inhalation - LC50 Vapor** 658000 mg/m³ [4 hours]
Isobutyl Acetate	**Rat - Oral - LD50** 13400 mg/kg **Rabbit - Dermal - LD50** >17400 mg/kg
Toluene	**Rat - Oral - LD50** 636 mg/kg **Rat - Inhalation - LC50 Vapor** 49 g/m³ [4 hours]

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result
Acetone	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Skin - Mild irritant** Amount/concentration applied: 395 mg
Isobutyl Acetate	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
Talc	**Human - Skin - Mild irritant** Duration of treatment/exposure: 72 hours Amount/concentration applied: 300 ug I
Toluene	**Pig - Skin - Mild irritant**

	Duration of treatment/exposure: 24 hours Amount/concentration applied: 250 uL **Rabbit - Skin - Mild irritant** Amount/concentration applied: 435 mg **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg **Rabbit - Skin - Moderate irritant** Amount/concentration applied: 500 mg
Titanium Dioxide	**Human - Skin - Mild irritant** Duration of treatment/exposure: 72 hours Amount/concentration applied: 300 ug I

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
Acetone	**Human - Eyes - Mild irritant** Amount/concentration applied: 186300 ppm **Rabbit - Eyes - Mild irritant** Amount/concentration applied: 10 uL **Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 20 mg
Isobutyl Acetate	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
Toluene	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 0.5 minutes Amount/concentration applied: 100 mg **Rabbit - Eyes - Mild irritant** Amount/concentration applied: 870 ug **Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 2 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 0.1 Ml

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Talc	-	3	-
Toluene	-	3	-
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Acetone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Isobutyl Acetate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Toluene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Talc	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) (inhalation) - Category 1
Toluene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Aspiration hazard

Product/ingredient name	Result
Toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Not available.

Section 11. Toxicological information

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Section 11. Toxicological information

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Acetone	5800	N/A	N/A	N/A	N/A
Butane	N/A	N/A	N/A	658	N/A
Isobutyl Acetate	13400	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	49	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Acetone	**Acute - EC50 - Fresh water** Algae - Green algae - *Selenastrum sp.* 7200 mg/l [96 hours] Effect: Population **Chronic - NOEC - Marine water** Algae - Green algae - *Ulva pertusa* 4.95 mg/l [96 hours] Effect: Reproduction **Chronic - NOEC - Fresh water** Crustaceans - Daphnia - *Daphniidae* 0.016 ml/l [21 days] Effect: Population **Chronic - NOEC - Marine water** Fish - Threespine stickleback - *Gasterosteus aculeatus* - Larvae Age: 7 days 5 µg/l [42 days] Effect: Population **Acute - LC50 - Marine water** ISO Crustaceans - Calanoid copepod - *Acartia tonsa* - Copepodid 4.42589 ml/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Guppy - *Poecilia reticulata* Age: 4 to 12 months; Size: 2 to 10 cm; Weight: 0.5 to 14 g 5600 ppm [96 hours] Effect: Mortality
Toluene	**Acute - LC50 - Fresh water** Fish - Coho salmon,silver salmon - *Oncorhynchus kisutch* - Fry Weight: 1 g 5500 µg/l [96 hours] Effect: Mortality **Acute - EC50 - Fresh water** Daphnia - Water flea - *Daphnia magna* - Juvenile (Fledgling, Hatchling, Weanling) 6000 µg/l [48 hours]

Section 12. Ecological information

	Effect: Intoxication **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* Age: ≤24 hours 1 mg/l [21 days] Effect: Mortality **Acute - EC50 - Fresh water** Algae - Green algae - *Raphidocelis subcapitata* 12.5 mg/l [72 hours] Effect: Growth
Titanium Dioxide	**Acute - LC50 - Marine water** Fish - Mummichog - *Fundulus heteroclitus* >1000 mg/l [96 hours] Effect: Mortality

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Toluene	-	90	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).	-	-	**Emergency schedules** F-D, S-U
	ERG No. 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	**ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	**ERG No.** 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	Dependent upon container size, this product may ship under the Limited Quantity shipping exception.

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to IMO instruments : Not available.

Proper shipping name : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

SARA 313

Section 15. Regulatory information

All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED and rely on information provided to us by our raw material suppliers. Our suppliers often provide an estimated value or range less than a certain upper limit. We calculate MAXIMUM THEORETICAL VALUES using defined values, if provided, or the upper limit reported by our supplier. Additionally, the suppliers' information may include amounts present in the product as unintentional byproducts or impurities. Variations may occur in individual batches due to adjustments made during production. Reporting of chemicals in this section does not necessarily indicate their presence in the final formulated product.

Ingredient name	% by weight	CAS number
Toluene Lead (as Pb)	5 0.000005	108-88-3

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

International regulations

Montreal Protocol

Not listed.

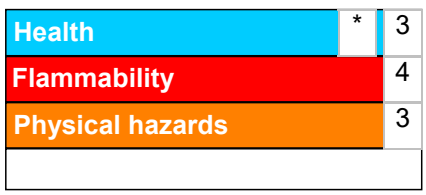
Stockholm Convention on Persistent Organic Pollutants

Not listed.

International lists : **Australia inventory (AIIC)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory (CSCL): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan Chemical Substances Inventory (TCSI): Not determined.
Thailand inventory: Not determined.
Turkey inventory: Not determined.
Vietnam inventory: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
AEROSOLS - Category 1	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method

History

Date of printing : 6/4/2025

Date of issue/Date of revision : 6/4/2025

Date of previous issue : 3/29/2025

Version : 29

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Safety Data Sheet

Issue date 19-Jul-2018 **Revision date** 19-Jul-2018 **Revision Number** 1

1. IDENTIFICATION

Product identification

Product identifier	Lawson Gloss Black High Solids Paint
Other means of identification	1509224
Recommended use	Coating
Restrictions on use	Not available

Supplier

Corporate Headquarters:
Lawson Products, Inc.
8770 W. Bryn Mawr Ave., Suite 900
Chicago, IL 60631
(866) 837-9908

Canadian Distribution Center:
Lawson Canada
7315 Rapistan Court
Mississauga, ON L5N 5Z4
(800) 323-5922

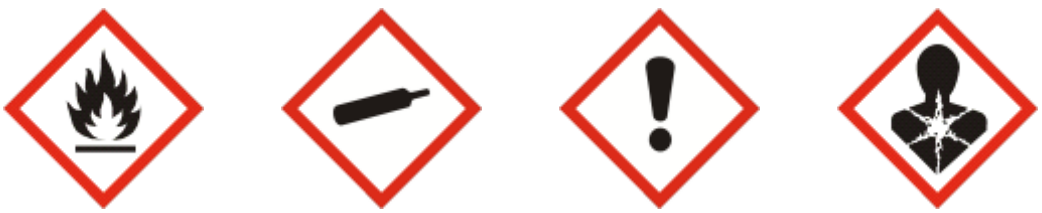
24 Hour Emergency Phone Number (888) 426-4851 (Prosar)

2. HAZARD(S) IDENTIFICATION

Hazard Classification .

Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable aerosols	Category 1
Gases under pressure	Compressed gas

Symbol



Signal word

DANGER

Hazard statements

H222 - Extremely flammable aerosol
H280 - Contains gas under pressure; may explode if heated
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements

General
P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P103 - Read label before use.

Prevention
P211 - Do not spray on an open flame or other ignition source
P223 - Keep away from any possible contact with water, because of violent reaction and possible flash fire
P233 - Keep container tightly closed
P251 - Pressurized container: Do not pierce or burn, even after use
P271 - Use only outdoors or in a well-ventilated area

Response

Eyes
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

Skin
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Inhalation
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Ingestion
P312 - Call a POISON CENTER or doctor if you feel unwell

Fire
P370 + P378 - In case of fire: Use appropriate method to extinguish

Spill
P391 - Collect spillage

Storage
P405 - Store locked up
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
P403 - Store in a well-ventilated place

Disposal
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Hazard(s) Not Otherwise Classified (HNOC)
None known.

Physical Hazards Not Otherwise Classified (PHNOC)
None known.

Unknown acute toxicity
None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition
Mixture.

Chemical name	CAS-No	Weight %
Acetone	67-64-1	21.59
Propane	74-98-6	15.74
N-Butane	106-97-8	9.24
Barium Sulfate	7727-43-7	9.17
Ethylene glycol monopropyl ether		

	2807-30-9	6.88
Isobutyl acetate	110-19-0	6.82
n-Butyl acetate	123-86-4	3.78
Methyl Propyl Ketone	107-87-9	1.47
Methyl isobutyl ketone	108-10-1	<1.0
Ethylbenzene	100-41-4	<1.0
Carbon Black	1333-86-4	<1.0

4. FIRST-AID MEASURES

Necessary first-aid measures

Inhalation Remove to fresh air. If symptomatic, contact a Poison Control Center, emergency room, or a physician for treatment information.

Ingestion Rinse mouth with water and spit out rinse. Do NOT induce vomiting.

Skin contact Remove contaminated clothing and footwear. Wash off immediately with soap and plenty of water.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Most important symptoms (acute) Dizziness.

Most important symptoms (over-exposure) Dizziness.

Indication of any immediate medical attention and special treatment needed Not available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Carbon dioxide (CO2). Dry powder. Water spray. For large fire, use water spray, fog or foam.

Unsuitable extinguishing media Not available.

Specific hazards Can form explosive gas-air mixtures.

Special protective equipment for fire-fighters If necessary, respiratory protective equipment (with the appropriate protection factor) should be provided and worn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use respiratory protective device against the effects of fumes/dust/aerosol.

Methods and materials for containment and cleaning up Absorb with liquid-binding material (sand, diatomite, universal binders).

7. HANDLING AND STORAGE

Precautions for safe handling

use in well ventilated areas.

Conditions for safe storage, including any incompatibilities

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store away from direct sunlight. Do not allow to freeze. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	OSHA PEL (TWA)	ACGIH OEL (TWA)	NIOSH - TWA
Acetone	1000 ppm TWA 2400 mg/m³ TWA	500 ppm STEL 250 ppm TWA	250 ppm TWA 590 mg/m³ TWA
Propane	1000 ppm TWA 1800 mg/m³ TWA	-	1000 ppm TWA 1800 mg/m³ TWA
N-Butane	-	1000 ppm STEL	800 ppm TWA 1900 mg/m³ TWA
Barium Sulfate	15 mg/m³ TWA 5 mg/m³ TWA	5 mg/m³ TWA	10 mg/m³ TWA 5 mg/m³ TWA
Ethylene glycol monopropyl ether	-	-	-
Isobutyl acetate	150 ppm TWA 700 mg/m³ TWA	150 ppm STEL 50 ppm TWA	150 ppm TWA 700 mg/m³ TWA
n-Butyl acetate	150 ppm TWA 710 mg/m³ TWA	150 ppm STEL 50 ppm TWA	200 ppm STEL 950 mg/m³ STEL 150 ppm TWA 710 mg/m³ TWA
Methyl Propyl Ketone	200 ppm TWA 700 mg/m³ TWA	150 ppm STEL	150 ppm TWA 530 mg/m³ TWA
Methyl isobutyl ketone	100 ppm TWA 410 mg/m³ TWA	75 ppm STEL 20 ppm TWA	75 ppm STEL 300 mg/m³ STEL 50 ppm TWA 205 mg/m³ TWA
Ethylbenzene	100 ppm TWA 435 mg/m³ TWA	20 ppm TWA	125 ppm STEL 545 mg/m³ STEL 100 ppm TWA 435 mg/m³ TWA
Carbon Black	3.5 mg/m³ TWA	3 mg/m³ TWA	3.5 mg/m³ TWA 0.1 mg/m³ TWA

Appropriate engineering controls

Not available.

Individual protection measures, such as personal protective equipment

Eye protection

Tightly fitting safety goggles.

Skin and body protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Nitrile gloves are recommended.

Respiratory protection

None under normal use. Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapors. In confined areas, use an approved air line respirator or hood. Self-contained breathing apparatus is required for vapor concentrations above PEL/TLV limits. Standard reference sources regarding industrial ventilation (i.e. ACGIH industrial ventilation) should be consulted for guidance about adequate ventilation.

Hygiene measures

Remove and wash contaminated clothing before re-use. Wash hands after handling the

product. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid contact with skin and eyes.

Canadian Province Occupational Exposure Limits

Chemical name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick - OEL	Newfoundland & Labrador - OEL	Nova Scotia - OEL	Ontario OEL	Prince Edward Island - OEL	Quebec OEL	Saskatchewan - OEL
Acetone	750 ppm STEL 1800 mg/m³ STEL 500 ppm TWA 1200 mg/m³ TWA	500 ppm STEL 250 ppm TWA	250 ppm TWA 500 ppm STEL	750 ppm STEL 1782 mg/m³ STEL 500 ppm TWA 1188 mg/m³ TWA	500 ppm STEL 250 ppm TWA	500 ppm STEL 250 ppm TWA	500 ppm STEL 250 ppm TWA	500 ppm STEL 250 ppm TWA	1000 ppm STEV 2380 mg/m³ STEV 500 ppm TWAEV 1190 mg/m³ TWAEV	750 ppm STEL 500 ppm TWA
Propane	1000 ppm TWA	1000 ppm TWA 1000 ppm TWA	-	-	-	-	-	-	1000 ppm TWAEV 1800 mg/m³ TWAEV	1250 ppm STEL 1000 ppm TWA 1000 ppm TWA
N-Butane	1000 ppm TWA	750 ppm STEL 600 ppm TWA 1000 ppm TWA	1000 ppm STEL	800 ppm TWA 1900 mg/m³ TWA	1000 ppm STEL	1000 ppm STEL	1000 ppm STEL	1000 ppm STEL	800 ppm TWAEV 1900 mg/m³ TWAEV	1250 ppm STEL 1000 ppm TWA 1000 ppm TWA 1000 ppm TWA
Barium Sulfate	10 mg/m³ TWA	10 mg/m³ TWA 3 mg/m³ TWA	5 mg/m³ TWA	10 mg/m³ TWA	5 mg/m³ TWA	5 mg/m³ TWA	5 mg/m³ TWA	5 mg/m³ TWA	10 mg/m³ TWAEV 5 mg/m³ TWAEV	20 mg/m³ STEL 10 mg/m³ TWA
Ethylene glycol monopropyl ether	-	-	-	-	-	-	25 ppm TWA 110 mg/m³ TWA	-	-	-
Isobutyl acetate	150 ppm TWA 713 mg/m³ TWA	150 ppm TWA	50 ppm TWA 150 ppm STEL	150 ppm TWA 713 mg/m³ TWA	150 ppm STEL 50 ppm TWA 50 ppm TWA	150 ppm STEL 50 ppm TWA	150 ppm TWA	150 ppm STEL 50 ppm TWA 50 ppm TWA	150 ppm TWAEV 713 mg/m³ TWAEV	188 ppm STEL 150 ppm TWA
n-Butyl acetate	200 ppm STEL 950 mg/m³ STEL 150 ppm TWA 713 mg/m³ TWA	20 ppm TWA	50 ppm TWA 150 ppm STEL	200 ppm STEL 950 mg/m³ STEL 150 ppm TWA 713 mg/m³ TWA	150 ppm STEL 50 ppm TWA 50 ppm TWA	150 ppm STEL 50 ppm TWA	200 ppm STEL 150 ppm TWA	150 ppm STEL 50 ppm TWA 50 ppm TWA	200 ppm STEV 950 mg/m³ STEV 150 ppm TWAEV 713 mg/m³ TWAEV	200 ppm STEL 150 ppm TWA
Methyl Propyl Ketone	250 ppm STEL 881 mg/m³ STEL 200 ppm TWA 705 mg/m³ TWA	250 ppm STEL 150 ppm TWA	150 ppm STEL	250 ppm STEL 881 mg/m³ STEL 200 ppm TWA 705 mg/m³ TWA	150 ppm STEL	150 ppm STEL	150 ppm STEL	150 ppm STEL	150 ppm TWAEV 530 mg/m³ TWAEV	250 ppm STEL 200 ppm TWA
Methyl isobutyl ketone	75 ppm STEL 307 mg/m³ STEL 50 ppm TWA 205 mg/m³ TWA	75 ppm STEL 20 ppm TWA	20 ppm TWA 75 ppm STEL	75 ppm STEL 307 mg/m³ STEL 50 ppm TWA 205 mg/m³ TWA	75 ppm STEL 20 ppm TWA	75 ppm STEL 20 ppm TWA	75 ppm STEL 20 ppm TWA	75 ppm STEL 20 ppm TWA	75 ppm STEV 307 mg/m³ STEV 50 ppm TWAEV 205 mg/m³ TWAEV	75 ppm STEL 50 ppm TWA
Ethylbenzene	125 ppm	20 ppm	20 ppm	125 ppm	20 ppm	20 ppm	20 ppm	20 ppm	125 ppm	125 ppm

Chemical name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick - OEL	Newfoundland & Labrador - OEL	Nova Scotia - OEL	Ontario OEL	Prince Edward Island - OEL	Quebec OEL	Saskatchewan - OEL
	STEL 543 mg/m³ STEL 100 ppm TWA 434 mg/m³ TWA	TWA	TWA	STEL 543 mg/m³ STEL 100 ppm TWA 434 mg/m³ TWA	TWA	TWA	TWA	TWA	STEV 543 mg/m³ STEV 100 ppm TWAEV 434 mg/m³ TWAEV	STEL 100 ppm TWA
Carbon Black	3.5 mg/m³ TWA	3 mg/m³ TWA	3 mg/m³ TWA	3.5 mg/m³ TWA	3 mg/m³ TWA	3 mg/m³ TWA	3 mg/m³ TWA	3 mg/m³ TWA	3.5 mg/m³ TWAEV	7 mg/m³ STEL 3.5 mg/m³ TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state Aerosol

Color Black

Odor Aromatic

Odor threshold Not available

pH Not available

Melting point/range °C Not available

Melting point/range °F Not available

Boiling point/range °C -44 °C

Boiling point/range °F -47 °F

Flash point °C -19

Flash point °F -2

Evaporation rate Not applicable

Flammability (Solid, Gas) Extremely flammable

Lower explosion limit 1.7 %

Upper explosion limit 10.9 %

Vapor pressure Not available

Vapor density Not available

Relative density 0.77-0.85

Solubility Not available

Partition coefficient (n-octanol/water) Not available

Autoignition temperature °C Product is not self-igniting

Autoignition temperature °F Product is not self-igniting

Decomposition temperature °C Not available

Decomposition temperature °F Not available

Viscosity Not available

10. STABILITY AND REACTIVITY

Reactivity Stable under normal conditions.

Chemical stability Not available.

Possibility of hazardous reactions None known.

Conditions to avoid Do not puncture, incinerate or expose to temperatures above 120 degrees F. Do not allow to freeze.

Incompatible materials Not available.

Hazardous decomposition products Not available.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure Eyes.

Symptoms Eye irritation.

Delayed and immediate effects as well as chronic effects from short and long-term exposure Not available.

Numerical measures of toxicity

Chemical name	Inhalation LC50:	Dermal LD50:	Oral LD50:
Acetone	= 50100 mg/m³ (Rat) 8 h	> 15700 mg/kg (Rabbit)	= 5800 mg/kg (Rat)
Propane	> 800000 ppm (Rat) 15 min	-	-
N-Butane	= 658 g/m³ (Rat) 4 h	-	-
Barium Sulfate	-	-	= 307000 mg/kg (Rat)
Ethylene glycol monopropyl ether	= 1530 ppm (Rat) 7 h	= 870 mg/kg (Rabbit) = 960 µL/kg (Rabbit)	= 3089 mg/kg (Rat)
Isobutyl acetate	-	> 17400 mg/kg (Rabbit)	= 15400 mg/kg (Rat)
n-Butyl acetate	= 390 ppm (Rat) 4 h	> 17600 mg/kg (Rabbit)	= 10768 mg/kg (Rat)
Methyl Propyl Ketone	2000 - 4000 ppm (Rat) 4 h	= 6480 mg/kg (Rat) = 6500 mg/kg (Rabbit)	= 1600 mg/kg (Rat)
Methyl isobutyl ketone	= 8.2 mg/L (Rat) 4 h	= 3000 mg/kg (Rabbit)	= 2080 mg/kg (Rat)
Ethylbenzene	= 17.4 mg/L (Rat) 4 h > 5.04 mg/L (Rat) 4 h	= 15400 mg/kg (Rabbit) > 2000 mg/kg (Rabbit)	= 3500 mg/kg (Rat) = 4820 mg/kg (Rat)
Carbon Black	-	> 3 g/kg (Rabbit)	> 15400 mg/kg (Rat)

ATEmix (dermal) Not available

ATEmix (oral) Not available

ATEmix (inhalation-gas) Not available

ATEmix (inhalation-vapor) Not available

ATEmix (inhalation-dust/mist) Not available

Carcinogenicity

Chemical name	ACGIH OEL - Carcinogens	IARC	OSHA RTK Carcinogens	NTP
Acetone	A4	-	-	-
Propane	-	-	-	-
N-Butane	-	-	-	-
Barium Sulfate	-	-	-	-
Ethylene glycol monopropyl ether	-	-	-	-
Isobutyl acetate	-	-	-	-
n-Butyl acetate	-	-	-	-
Methyl Propyl Ketone	-	-	-	-
Methyl isobutyl ketone	A3	Group 2B	Listed	-
Ethylbenzene	A3	Group 2B	Listed	-
Carbon Black	A3	Group 2B	Listed	-

Canadian Province carcinogenicity limits

Chemical name	Alberta - Carcinogen	British Columbia - Carcinogen	Manitoba - Carcinogen	New Brunswick - Carcinogen	Nova Scotia - Carcinogen	Quebec - Carcinogen
Acetone	-	-	ACGIH A4	ACGIH A4	ACGIH A4	-
Propane	-	-	-	-	-	-
N-Butane	-	-	-	-	-	-
Barium Sulfate	-	-	-	-	-	-
Ethylene glycol monopropyl ether	-	-	-	-	-	-
Isobutyl acetate	-	-	-	-	-	-
n-Butyl acetate	-	-	-	ACGIH A4	-	-
Methyl Propyl Ketone	-	-	-	-	-	-
Methyl isobutyl ketone	-	IARC 2B	ACGIH A3	-	ACGIH A3	-
Ethylbenzene	-	IARC 2B	ACGIH A3	-	ACGIH A3	-
Carbon Black	-	IARC 2B	ACGIH A3	ACGIH A4	ACGIH A3	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish
Acetone	-	4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50
Propane	-	-

Chemical name	Algae/aquatic plants	Fish
N-Butane	-	-
Barium Sulfate	-	-
Ethylene glycol monopropyl ether	-	-
Isobutyl acetate	-	101: 48 h Leuciscus idus melanotus mg/L LC50 static 101 - 123: 48 h Leuciscus idus melanotus mg/L LC50 flow-through
n-Butyl acetate	674.7: 72 h Desmodesmus subspicatus mg/L EC50	100: 96 h Lepomis macrochirus mg/L LC50 static 17 - 19: 96 h Pimephales promelas mg/L LC50 flow-through 62: 96 h Leuciscus idus mg/L LC50 static
Methyl Propyl Ketone	-	1190 - 1290: 96 h Pimephales promelas mg/L LC50 flow-through
Methyl isobutyl ketone	400: 96 h Pseudokirchneriella subcapitata mg/L EC50	496 - 514: 96 h Pimephales promelas mg/L LC50 flow-through
Ethylbenzene	4.6: 72 h Pseudokirchneriella subcapitata mg/L EC50 2.6 - 11.3: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 438: 96 h Pseudokirchneriella subcapitata mg/L EC50 1.7 - 7.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 11: 72 h Pseudokirchneriella subcapitata mg/L EC50	11.0 - 18.0: 96 h Oncorhynchus mykiss mg/L LC50 static 32: 96 h Lepomis macrochirus mg/L LC50 static 9.6: 96 h Poecilia reticulata mg/L LC50 static 9.1 - 15.6: 96 h Pimephales promelas mg/L LC50 static 4.2: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 7.55 - 11: 96 h Pimephales promelas mg/L LC50 flow-through
Carbon Black	-	-

Persistence and degradability Not expected to be rapidly degradable.

Bioaccumulation

Chemical name	CAS-No	Partition coefficient (log Kow)
Acetone 67-64-1	67-64-1	-0.24
Propane 74-98-6	74-98-6	2.3 <=2.8
N-Butane 106-97-8	106-97-8	2.89 <=2.8
Barium Sulfate 7727-43-7	7727-43-7	-
Ethylene glycol monopropyl ether 2807-30-9	2807-30-9	-
Isobutyl acetate 110-19-0	110-19-0	1.72
n-Butyl acetate 123-86-4	123-86-4	1.81 23 °C
Methyl Propyl Ketone 107-87-9	107-87-9	0.91
Methyl isobutyl ketone 108-10-1	108-10-1	1.19
Ethylbenzene 100-41-4	100-41-4	3.2
Carbon Black 1333-86-4	1333-86-4	-

Mobility in soil Not available.

Other adverse effects Hazardous for water, do not empty into drains.

13. DISPOSAL CONSIDERATIONS

Disposal information Dispose of all product, residues and clean-up materials in accordance with local, state, and federal regulations. Do not puncture, incinerate, or crush. Do not heat or cut empty containers with electric or gas torches.

Contaminated packaging Please recycle empty container whenever possible.

14. TRANSPORTATION INFORMATION

Shipping Descriptions

DOT

ID-No	UN1950
Proper shipping name	Aerosols, flammable
Hazard Class(es)	2.1
Special Provisions	LTD QTY

TDG

ID-No	UN1950
Proper shipping name	Aerosols, flammable
Hazard Class(es)	2.1
Special Provisions	LTD QTY

IATA

ID-No	UN1950
Proper shipping name	Aerosols, flammable
Hazard Class(es)	2.1
Special Provisions	LTD QTY

IMDG/IMO

ID-No	UN1950
Proper shipping name	Aerosols, flammable
Hazard Class(es)	2.1
EmS No	F-D, S-U
Special Provisions	LTD QTY, 1L

Marine Pollutants

Chemical name	CAS-No	USDOT Marine Pollutant	Canada TDG Marine Pollutant	IMDG Marine Pollutant
Acetone	67-64-1	-	-	-
Propane	74-98-6	-	-	-
N-Butane	106-97-8	-	-	-
Barium Sulfate	7727-43-7	-	-	-
Ethylene glycol monopropyl ether	2807-30-9	-	-	-
Isobutyl acetate	110-19-0	-	-	-
n-Butyl acetate	123-86-4	-	-	-
Methyl Propyl Ketone	107-87-9	-	-	-
Methyl isobutyl ketone	108-10-1	-	-	-
Ethylbenzene	100-41-4	-	-	-
Carbon Black	1333-86-4	-	-	-

15. REGULATORY INFORMATION

State regulations

U.S. state Right-to-Know regulations

Chemical name	CAS-No	Massachusetts - RTK	New Jersey - RTK	Pennsylvania - RTK
Acetone	67-64-1	X	X	X
Propane	74-98-6	X	X	X
N-Butane	106-97-8	X	X	X
Barium Sulfate	7727-43-7	X	X	X
Ethylene glycol monopropyl ether	2807-30-9	-	X	X
Isobutyl acetate	110-19-0	X	X	X
n-Butyl acetate	123-86-4	X	X	X
Methyl Propyl Ketone	107-87-9	X	X	X
Methyl isobutyl ketone	108-10-1	X	X	X
Ethylbenzene	100-41-4	X	X	X
Carbon Black	1333-86-4	X	X	X

California Prop. 65

Chemical name	CAS-No	California Prop. 65
Acetone	67-64-1	-
Propane	74-98-6	-
N-Butane	106-97-8	-
Barium Sulfate	7727-43-7	-
Ethylene glycol monopropyl ether	2807-30-9	-
Isobutyl acetate	110-19-0	-
n-Butyl acetate	123-86-4	-
Methyl Propyl Ketone	107-87-9	-
Methyl isobutyl ketone	108-10-1	Carcinogen Developmental
Ethylbenzene	100-41-4	Carcinogen
Carbon Black	1333-86-4	Carcinogen

California Proposition 65 WARNING: This product contains a chemical(s) known to the state of California to cause cancer, birth defects or other reproductive harm

U.S. Federal Regulations

US EPA SARA 313

Chemical name	CAS-No	CERCLA/SARA Hazardous Substances RQ	SARA 313 - Threshold Values
Acetone	67-64-1	5000 lb 2270 kg	-
Propane	74-98-6	-	-
N-Butane	106-97-8	-	-
Barium Sulfate	7727-43-7	-	1.0 %
Ethylene glycol monopropyl ether	2807-30-9	-	1.0 %
Isobutyl acetate	110-19-0	5000 lb 2270 kg	-
n-Butyl acetate	123-86-4	5000 lb 2270 kg	-
Methyl Propyl Ketone	107-87-9	-	-
Methyl isobutyl ketone	108-10-1	5000 lb 2270 kg	1.0 %

Chemical name	CAS-No	CERCLA/SARA Hazardous Substances RQ	SARA 313 - Threshold Values
Ethylbenzene	100-41-4	1000 lb 454 kg	0.1 %
Carbon Black	1333-86-4	-	-

US EPA SARA 311/312 hazardous categorization Not available

International inventories All components of this product are listed on the following inventories: U.S.A. (TSCA 8(b)), Canada (DSL/NDSL) or are exempt.

Chemical name	DSL/NDSL	Inventory - United States - Section 8(b) Inventory (TSCA)	U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification
Acetone	X	X	-
Propane	X	X	-
N-Butane	X	X	-
Barium Sulfate	X	X	-
Ethylene glycol monopropyl ether	X	X	-
Isobutyl acetate	X	X	-
n-Butyl acetate	X	X	-
Methyl Propyl Ketone	X	X	-
Methyl isobutyl ketone	X	X	-
Ethylbenzene	X	X	-
Carbon Black	X	X	-

Legend X - Listed

16. OTHER INFORMATION

NFPA

Health Not available
Flammability Not available
Instability Not available

HMIS

Health Not available
Flammability Not available
Physical hazards Not available

Notice: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

Prepared by Regulatory Affairs

Issue date 19-Jul-2018

Revision date 19-Jul-2018

Revision note

Key to abbreviations

ACGIH (American Conference of Governmental Industrial Hygienists)
ATE (Average Toxicity Estimate)
DSL/NDSL (Domestic Substance List/Non-Domestic Substance List)
HMIS (Hazardous Materials Identification System)
IARC (International Agency for Research on Cancer)
IATA (International Air Transport Association)
IMDG/IMO (International Maritime Dangerous Goods/International Maritime Orgnaization)
NFPA (National Fire Protection Association)
NTP (National Toxicology Program)
OEL (Occupational Exposure Level)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEL (Permissible Exposure Limit)
TSCA (Toxic Substance Control Act)
USEPA (United States Environmental Protection Agency)

Disclaimer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

End of Safety Data Sheet

中国认可
检验
INSPECTION
CNAS IB0071

NO.2618040050

SAFETY DATA SHEET

Product Name: LENS CLEANING TOWELETTE

Revision Date: 2018-05-07

Compiler: Liu Linlin

Checker: Dongxuesheng

Approver: Zhangxiaojin

Shanghai Research Institute of Chemical Industry Testing Centre

Taizhou Kangping MEDICAL SCIENCE & Technology Co Ltd

SAFETY DATA SHEET

LENS CLEANING TOWELETTE

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name:	LENS CLEANING TOWELETTE
Company:	Taizhou Kangping MEDICAL SCIENCE & Technology Co Ltd
Address:	No. 3 Building, No. 27, Tai'an Road, Hailing Industrial Park, Taizhou City, 225300, P. R. China
Email:	1009347087@qq. com
Fax:	0086-523-86277168
Emergency Phone:	0086-13814481789
SDS Number:	2618040050
SDS Date:	2018-05-07

SECTION2 HAZARDS IDENTIFICATION

The liquid contained in nonwoven:

GHS Classification:

Physical Hazards:
Flammable liquids (Category 3)

Health Hazards:
Skin corrosion/irritation (Category 3)
Eye damage/Eye irritation (Category 2A)
Reproductive toxicity (Category 2)
Specific target organ toxicity - Single exposure (Category 1) (central nervous system, systemic toxicity)
Specific target organ toxicity - Single exposure (Category 3)
Specific target organ toxicity - Repeated exposure (Category 1) (blood system)
Specific target organ toxicity - Repeated exposure (Category 2) (respiratory organs, liver, spleen)

Environmental Hazards:
Not classified.

The hazards not mentioned are not applicable or no data available.

GHS Labelling:

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Pictogram:



Signal Word:
Danger

Hazard Statements:
Flammable liquid and vapour.
Causes mild skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
Causes damage to organs: central nervous system, systemic toxicity.
May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure: blood system.
May cause damage to organs through prolonged or repeated exposure: respiratory organs, liver, spleen.

Prevention Precautionary Statements:
Keep away from heat, sparks, open flames, hot surfaces and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof [electrical/ventilating/lighting]equipment.
Use non-sparking tools.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapours/spray.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.

Response Precautionary Statements:
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
In case of fire: Use Dry chemical, Water spray, Carbon dioxide or appropriate foam to extinguish.
If skin irritation occurs: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Call a POISON CENTER/doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
Get medical advice/attention if you feel unwell.

Storage Precautionary Statements:
Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Store locked up.

Disposal Precautionary Statements:
Dispose of contents/container in accordance with local / regional / national / international regulation.

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SECTION3 INFORMATION ON INGREDIENTS

Product name: LENS CLEANING TOWELETTE

Ingredient	Concentration	CAS No.	EC No.
The liquid contained in nonwoven			
Isopropyl alcohol	40%	67-63-0	200-661-7
Water	59.99%	7732-18-5	231-791-2

SECTION4 FIRST-AID MEASURES

The liquid contained in nonwoven:

Skin Exposure:

In case of skin contact, flush with copious amounts of water. If irritation persists, Call a physician.

Eye Exposure:

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. If irritation persists, Call a physician.

Inhalation Exposure:

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Oral Exposure:

If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed:

No data available.

Indication of any immediate medical attention and special treatment needed:

No data available.

SECTION5 FIRE FIGHTING MEASURES

Extinguishing Media:

Suitable: Dry chemical, Water spray, Carbon dioxide or appropriate foam.

Special hazards arising from the substance or mixture:

May decompose upon combustion or in high temperatures to generate Carbon oxides.

Advice for firefighters:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fire-extinguishing work is done from the windward. Uninvolved persons should evacuate to a safe place. Keep containers cool by spraying with water.

SECTION6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Remove all sources of ignition. Avoid breathing vapors, mist or gas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to noninvolved personnel should be controlled around the leakage area by roping off.

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Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up:

Mix with inert material (e.g. dry sand, vermiculite) and transfer to a dry, clean, lidded container for disposal. Avoid inhalation. Ventilate area and wash spill site after material pickup is complete.

SECTION7 HANDLING AND STORAGE

Precautions for safe handling:

Wear appropriate protective clothing and gloves. Avoid inhalation. Avoid contact with eyes, skin and clothing. Prevent generation of vapour or mist. Handling is performed in a well ventilated place. Keep away from ignition sources, heat and flame. Take measures to prevent the build up of electrostatic charge. Electrostatic charges may be generated during pumping. Ensure electrical continuity by bonding all equipment. Do not expose empty containers to heat, sparks or open flames. Incompatibilities: Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids, combustible materials. Wash hands and face thoroughly after handling. No smoking at working site.

Conditions for safe storage, including any incompatibilities:

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Keep away from ignition sources, heat and flame. Incompatibilities: Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids, combustible materials.

SECTION8 EXPOSURE CONTROL/PPE

Control parameters:

Isopropyl alcohol: ACGIH TLV(TWA): 200 ppm
ACGIH TLV(STEL): 400 ppm

Appropriate engineering controls:

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment:

Respiratory: Wear government approved respirator.
Eye: Wear chemical safety glasses.
Clothing: Wear anti-electrostatic clothing.
Hand: Wear compatible protective gloves.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

Appearance:	White wet nonwoven
Odor:	Weak odor
Initial Boiling Point/℃:	83.2℃
Flash Point (Closed Cup)/℃:	24.0℃
pH Value:	6.7-6.8
Solubility(ies):	Partial slightly soluble in water
Density/Relative Density:	0.9146×10^3kg/m^3(20℃)
Viscosity:	3.135mm^2/s(kinematic viscosity)

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SECTION10 STABILITY AND REACTIVITY

Reactivity:
No data available.

Chemical stability:
Stable under normal temperatures and pressures.

Possibility of hazardous reactions:
No data available.

Conditions to avoid:
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials:
Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids.

Hazardous Decomposition Products:
Carbon oxides.

SECTION11 TOXICOLOGICAL INFORMATION

The liquid contained in nonwoven:

Acute Toxicity:
Isopropyl alcohol: Rat Oral LD_{50}: 5045mg/kg
Rat Inhalation LC_{50}: 16000 ppm/8H
Rabbit Dermal LD_{50}: 12800mg/kg

Skin Corrosion/Irritation:
Causes mild skin irritation.

Serious eye damage/irritation:
Causes serious eye irritation.

Respiratory or skin sensitization:
No data available.

Germ cell mutagenicity:
No data available.

Carcinogenicity:
No data available.

Reproductive toxicity:
Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure:
Causes damage to organs: central nervous system, systemic toxicity.
May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure:
Causes damage to organs through prolonged or repeated exposure: blood system.
May cause damage to organs through prolonged or repeated exposure: respiratory organs, liver, spleen.

Aspiration hazard:
No data available.

SECTION12 ECOLOGICAL INFORMATION

The liquid contained in nonwoven:

Ecotoxicity:

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Isopropyl alcohol: Toxicity to fish flow-through test LC_{50} - Pimephales promelas (fathead minnow) - 9.640 mg/l - 96 h
(US-EPA)
Toxicity to daphnia and other aquatic invertebrates EC_{50} - Daphnia magna (Water flea) - 13.299 mg/l - 48 h
Remarks: (IUCLID)
Toxicity to algae IC_{50} - Desmodesmus subspicatus (green algae) - > 1.000 mg/l - 72 h
Remarks: (IUCLID)
Toxicity to bacteria EC_5 - Pseudomonas putida - 1.050 mg/l - 16 h
Remarks: (Lit.)

Persistence and Degradability:
Isopropyl alcohol: Biodegradability aerobic - Exposure time 21 d
Result: 95 % - Readily biodegradable.
(OECD Test Guideline 301E)

Bioaccumulative Potential:
Isopropyl alcohol: No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil:
No data available.

Other adverse effects:
No data available.

SECTION13 DISPOSAL CONSIDERATION

Appropriate Method of Disposal of Substance:
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with and afterburner and scrubber. Observe all federal, state, and local environmental regulations.

SECTION14 TRANSPORT INFORMATION

IATA: The product is not restricted to IATA DGR according to special provision A46, when small inner packagings consisting of sealed packets or articles containing less than 10mL of packing group II or III flammable liquid absorbed into a solid material.

IMO: The product is not restricted to IMO IMDG according to special provision 216, when small inner packagings consisting of sealed packets or articles containing less than 10mL of packing group II or III flammable liquid absorbed into a solid material.

SECTION15 REGULATORY INFORMATION

Regulation (EC) No.1272/2008 and its amendments:
Flammable liquid (Category 3)
Eye damage/Eye irritation (Category 2)
Reproductive toxicity (Category 2)
Specific target organ toxicity - Single exposure (Category 1) (central nervous system, systemic toxicity)
Specific target organ toxicity - Single exposure (Category 3)
Specific target organ toxicity - Repeated exposure (Category 1) (blood system)
Specific target organ toxicity - Repeated exposure (Category 2) (respiratory organs, liver, spleen)

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SECTION16 OTHER INFORMATION

Date:

2018-05-07

Department:

Shanghai Research Institute of Chemical Industry Testing Centre
Tel(Fax):8621-52815377/52800971/52807275/52811034/52569800

Revision:

0

Reference Standard:

GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), 6th revised edition

Other Information:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information.

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West Texas Lighthouse for the Blind
2001 Austin Street
San Angelo, TX 76903
www.lighthousefortheblind.org
Phone: (325) 653-4231
Fax: (325) 657-9367

Addendum to: SDS ID: No. 2618040050
Material Name: Lens Cleaning Towelette

Product Name: Towelettes, Lens Cleaning, Pocket Sized
National Stock Number: 7930-01-680-9882

Details for the contractor for NSN 7930-01-680-9882

West Texas Lighthouse for the Blind
2001 Austin Street
San Angelo, TX 76903
USA
Phone: (325) 653-4231
E-mail: WTLB@lighthousefortheblind.org
Cage Code: 6Y777

Details for the manufacture of NSN 7930-01-680-9882

Taizhou Kangping Medical Science & Technology Co. Ltd
No. 3 Building, No. 27, Tai'an Road
Hailing Industrial Park,Taizhou City
225300
P.R. China
Phone: 0086-13814481789
E-mail: 1009347087@qq.com

NRP

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATON

PRODUCT: **MULTI PURPOSE LITHIUM GREASE** **HFPA CODES: H F R**
PRODUCT CODE: **N3124,N3127** **1 1 0**
HMIS CODES: PERSONAL PROTECTON B

MANUFACTURER: LUBRIMATIC / WITCO
ADDRESS: 1400 SOUTH HARRISON, OLATHE, KANSAS 66061
INFORMATION: 913-782-5800 **EMERGENCY:** CHEMTREC 800-424-9300
DATE: 5/2003 **PREPARER:** R. Madariaga
DISTRIBUTOR: **NATIONAL REFRIGERATION PRODUCTS**
2900 SAMUEL DRIVE · BENSALEM, PA 19020-7306
1-800-352-6951

COMPOSITION, INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUM	CONTENTS:	EPA RQ:	TPQ:
PETROLEUM DISTILLATES AND RESIDUAL OILS**		70-100%	NA	NA
CARBON BLACK	1333-86-4	.1-1%	NA	NA

COMPOSITION COMMENTS: REFER TO SECTION EIGHT FOR EXPOSURE LIMITS ON INGREDIENTS
CHEMICAL INGREDIENTS NOT REGULATED BY OSHA OR SARA ARE TREATED CONFIDENTIALLY
** MIXTURE OF CAS REGISTRY NUMGERS 64742-52-5 & 64742-57-0

HAZARDS IDENTIFICATION

EXPOSURE TO VAPORS GENERATED AT HIGH TEMPERATURES MAY CAUSE RESPIRATORY IRRITATION.
CHRONIC EFFECTS:
SENSITIZATION:
NO KNOWN INFORMATION

CARCINOGENICTY:
PRODUCT CONTAINS:
IARC-3 AND NIOSH-X LISTED CARCINOGEN(S)
CARBON BLACK, CAS# 1333-86-4, 0.1-1%

HEALTH WARNINGS:
INHALATION: HEATING CAN GENERATE VAPORS THAT MAY CAUSE RESPIRATORY IRRITATION, NAUSEA, HEADACHE. INHALATION HAZARD AT ROOM TEMPERATURE IS UNLIKELY DUE TO THE LOW VOLATILITY OF THIS PRODUCT.
SKIN CONTACT: REPEATED OR PROLONGED CONTACT CAN RESULT IN DRYING OF THE SKIN. **EYE CONTACT:** IRRITATING.
INGESTION: CAN CAUSE STOMACH ACHE AND VOMITING. MAIN HAZARD, IF INGESTED IS ASPIRATION INTO THE LUNGS AND SUBSEQUENT PNEUMONITIS.

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ROUTE OF ENTRY: INHALATION. SKIN AND/OR EYE CONTACT. INGESTION.
MEDICAL SYMPTOMS: MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT DETERMINED

FIRST AID MEASURES

INHALATION: VAPOR INHALATION UNDER AMBIENT CONDITIONS IS NORMALLY NOT A PROBLEM. IF OVERCOME BY VAPOR OF HOT PRODUCT, IMMEDIATELY REMOVE FROM SOURCE OF EXPOSURE. MOVE THE EXOOSED PERSON TO FRESH AIR AT ONCE. FOR BREATHING DIFFICULITIES, OXYGEN MAY BE NECESSARY. GET MEDICAL ATTENTION IF ANY DISCOMFORT CONTINUES.
INGESTION: DO NOT INDUCE VOMITING! GET MEDICAL ATTENTION IMMEDIATELY!
SKIN: REMOVE CONTAMINATED CLOTHING. WASH SKIN THROUGHLY WITH SOAP AND WATER. GET MEDICAL ATTENTION IF ANY DISCOMFORT CONTINUES.
EYES: RINSE THE EYE WITH WATER IMMEDIATELY. CONTINUE TO RINSE FOR AT LEAST 15 MINUTES. CONTACT PHYSICIAN IF DISCOMFORT CONTINUES.

FIRE FIGHTING MEASURES

FLASH POINT: 435°F METHOD: Cd OC (CLEVELAND OPEN CUP)
FLAMMABLE LIMITS: LEL: N/D UEL:N/D
EXTINGUISHING MEDIA: USE CO2, DRY CHEMICAL, SAND, ETC. ALCOHOL RESISTANT FOAM. WATER SPRAY, FOG OR MIST.
SPECIAL FIREFIGHTING PROCEDURES: USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL AND DISPERSE VAPORS. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURES AND DILUTE SPILLS TO NON-FLAMMABLE MIXTURES. AVOID WATER IN STRAIGHT HOSE STREAM; WILLSCATTER AND SPREAD FIRE. KEEP RUN-OFF WATER OUT OF SEWERS AND WATER SOURCES. DIKE FOR WATER CONTROL.
UNUSUAL FIRE AND EXPLOSION HAZARDS: PRESSURE WILL INCREASE IN OVER HEATED, CLOSED CONTAINERS.
HAZARDOUS COMBUSTION PRODUCTS: ACRID SMOKE/FUMES. OXIDES OR CARBON.
PROTECTIVE MEASURES IN CASE OF FIRE: SELF-CONTAINED BREATHING EQUIPMENT AND CHEMICAL RESISTANT CLOTHING RECOMMENDED.

ACCIDENTIAL RELEASE MEASURES

PERSONAL PRECAUTIONS: MINIMIZE SKIN CONTACT.
PRECAUTIONS TO PROTECT THE ENVIRONMENTAL: KEEP PRODUCT OUT OF SEWERS AND WATERCOURSES BY DIKING OR IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATERCOURSES OR EXTENSIVE LAND AREAS. ASSURE CONFORMITY WITH APPLICABLE GOVERNMENT REGULATIONS.
SPILL CLEAN-UP PROCEDURES: KEEP ALL SOURCES OF IGNITION AND HOT METALSURFACES AWAY FROM SPILL. AVOID CONTACT WTH EYES OR SKIN. PLACE LEAKING CONTAINERS IN WELL VENTILATED AREA. IF FIRE POTENTIAL EXISTS, BLANKET SPILL WITH FOAM OR USE WATER SPRAY TO DISPERSE VAPORS. CONTAIN SPILL TO MINIMIZE CONTAMINATED AREA AND FACILITATE SALVAGE OR DISPOSAL. TO CLEAN UP SPILL, FLUSH AREA SPARINGLY WITH WATER OR USE ABSORBANT MATERIAL. AVOID DISCHARGE TO NATURAL WATER WAYS.

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HANDLING AND STORAGE

HANDLING PRECAUTIONS: KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. VENTILATE WELL, AVOID BREATHING VAPORS. USE APPROVED RESPIRATOR IF AIR CONTAMINATION IS ABOVE ACCEPTED LEVEL. DO NOT REUSE CONTAINER. KEEP LID CLOSED WHEN NOT IN USE. DO NOT STORE OR MIX WITH STRONG OXIDIZERS. AVOID SPILLING, SKIN AND EYE CONTACT. EYE WASH AND EMERGENCY SHOWER MUST BE AVAILABLE AT THE WORKPLACE.
STORAGE PRECAUTIONS: STORE SEPARATE FROM STRONG ACIDS AND OXIDIZERS. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.
STORAGE CRITERIA: CHEMICAL STORAGE.

EXPOSURE CONTROLS, PERSONAL PROTECTION

		OSHA PEL:		ACGIH TLV:		OTHER:		
INGREDIENT NAME:	**CAS NO:**	**TWA:**	**STEL:**	**TWA:**	**STEL:**	**TWA:**	**STEL:**	**UNITS:**
PETROLEUM DISTILLATES AND RESIDUAL OILS		5	NAV	5	10	NAV	NAV	MG/M3
CARBON BLACK	1333-86-4	3.5	NE	3.5	NE	3.5	NE	MG/M3

ENGINEERING CONTROLS: USE ENGINEERING CONTROLS TO REDUCE AIR CONTAMINATION TO PERMISSSIBLE EXPOSURE LEVEL.
VENTILATION: NO SPECIFIC VENTILATION REQUIREMENTS NOTED, BUT FORCED VENTILATION MAY STILL BE REQUIRED IF AIR CONTAMINATION EXCEEDS ACCEPTABLE LEVEL.
RESPIRATORS: NO SPECIFIC RECOMMENDATION MADE, BUT RESPIRATORY PROTECTION MAY STILL BE REQUIRED UNDER EXCEPTIONAL CIRCUMSTANCES WHEN EXCESSIVE AIR CONTAMINATION EXISTS.
PROTECTIVE GLOVES: CHEMICAL RESISTANT GLOVES RECOMMENDED TO PREVENT PROLONGED OR REPEATED CONTACT.
PROTECTIVE CLOTHING: WEAR APPROPRIATE CLOTHING TO PREVENT REPEATED OR PROLONGED SKIN CONTACT.
HYGIENIC WORK PRACTICES: WASH AT THE END OF EACH WORK SHIFT AND BEFORE EATING, SMOKING AND USING THE TOILET.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: GREASE
COLOR: BLACK
ODOR: MILD (OR FAINT) PETROLEUM
SOLUBILITY DESCRIPTION: INSOLUBLE IN WATER
SOLUBILITY VALUE (g/100g H20 68 DEG. F): <0.1
DENSITY/SPECIFIC GRAVITY (g/ml): 0.90 TEMPERATURE (F) 61
VAPOR DENSITY (AIR=1): >5
VAPOR PRESSURE: <0.01 mmHg TEMPERATURE (F) 68
EVAPORATION RATE: <1 REFERENCE: BuAc=1
Ph-VALUE, CONC. SOLUTION: NA

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STABILITY AND REACTIVITY

STABILITY: NORMALLY STABLE
CONDITIONS TO AVOID: AVOID CONTACT WITH ACIDS AND OXIDIZING SUBSTANCES.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.
POLYMERIZATION DESCRIPTION: NA
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: OXIDES OF CARBON.

TOXICOLOGICAL INFORMATION

NO EXPERIMENTAL TOXILOGICAL DATA ON THE PREPARATION AS SUCH IS AVAILABLE.

ECOLOGICAL INFORMATION

THERE IS NO ECOLOGICAL DATA ON THE PRODUCT ITSELF.

DISPOSAL CONSIDERATIONS

SPILLED MATERIAL, UNUSED CONTENTS AND EMPTY CONTAINERS MUST BE DISPOSED OF IN ACCORDANDE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

TRANSPORT INFORMATION

U.S. DOT: NOT REGULATED

REGULATORY INFORMATON

REGULATORY STATUS OF INGREDIENTS:

NAME:	**TSCA:**	**CERCLA:**	**SARA 302**	**SARA 313**	**DSL (CAN)**
PETROLEUM DISTILLATES AND RESIDUAL OILS	YES	NA	NA	NA	YES
CARBON BLACK	YES	NA	NA	NA	YES

FEDERAL REGULATIONS:
REGULATORY STATUS: THIS PRODUCT OR ITS COMPONENTS, IF A MIXTURE, IS SUBJECT TO FOLLOWING REGULATION (NOT MEANT TO BE ALL INCLUSIVE-SELECTED REGULATION REPRESENTED). TSCA: THE INGREDIENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY. SARA 311 CATEGORIES: NONE. SECTION 313: THIS PRODUCT MAY CONTAIN TOXIC CHEMICAL SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE 111 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. ZINC COMPOUNDS UP TO 3% AND ANTIMONY COMPOUNDS UP TO 0.5%

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DISCLAIMER

INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BELIEVED TO BE ACCURATE AT THE TIME OF PREPARATION. NO WARRANTY IS MADE CONCERNING THE ACCURACY AND NO LIABILITY SHALL BE MADE FOR CLAIMS FOR USE OR RELIANCE OF THE RECOMMENDATIONS CONTAINED HEREIN.

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SAFETY DATA SHEET

Lucas Heavy Duty Oil Stabilizer

Section 1. Identification

GHS product identifier : Lucas Heavy Duty Oil Stabilizer

Other means of identification : Not available.

Product number : 10001, 10002, 10015, 10085, 10091, 30002, 30002A, 30002R, 30002O

Relevant identified uses of the substance or mixture and uses advised against

Oil additives.

Supplier's details : Lucas Oil Products, Inc
302 North Sheridan Street
Corona, California 92878
Toll Free: (800) 342-2512
Tel: (951) 270-0154
Fax: (951) 270-1902
Website: www.LucasOil.com

Emergency telephone number (with hours of operation) : ChemTel 1-800-255-3924 (USA, Canada, Puerto Rico, US V.I.) 1-813-248-0585 (International). 24 hrs/day, 365 days/year.

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

Ingredient name	%	CAS number
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based	60 - 100	72623-83-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : No special precaution is required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based	**ACGIH TLV (United States, 3/2012).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 6/2009).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear.]

Color : Amber.

Odor : Petroleum.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : >260°C (>500°F)

Flash point : Closed cup: 218.33°C (425°F)

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.8958

Solubility : Negligible at 25°C

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Kinematic (100°C (212°F)): 1.1 cm^2/s (110 cSt)

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

Skin : There is no data available.

Section 11. Toxicological information

Eyes : There is no data available.

Respiratory : There is no data available.

Sensitization

Skin : There is no data available.

Respiratory : There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

Name	Result
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Section 11. Toxicological information

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Section 14. Transport information

Additional information	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: All components are listed or exempted.
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: Lubricating oils, petroleum, c>25, hydrotreated bright stock-based

Pennsylvania : None of the components are listed.

California Prop. 65

No products were found.

International regulations

Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 0 * **Flammability :** 1 **Physical hazards :** 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 0 **Flammability :** 1 **Instability :** 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue mm/dd/yyyy : 12/30/2012

Version : 1

Revised Section(s) : Not applicable.

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Hub Oil

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 7/9/2025 Revision date: 5/21/2026 Supersedes: 2/19/2026 Version: 3.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Hub Oil
Part Number : 10088

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Lubricating oil

1.4. Supplier's details

Lucas Oil Products, Inc.
3199 Harrison Way NW
Corydon, IN 47112
USA
T 800-342-2512
sds@lucasoil.com - www.LucasOil.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week. Within USA, Canada, Puerto Rico & US Virgin Islands: 1-800-255-3924. International: 1-813-248-0585 (collect calls accepted). Australia: 1-300-954-583. Brazil: 0-800-591-6042. China: 400-120-0751. India: 000-800-100-4086. Mexico: 800-099-0731.

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. Label elements

GHS US labeling

No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Sulfurized olefin	CAS-No.: Undisclosed	0.5 - 1.5*	Flam. Liq. 4, H227 Aquatic Chronic 4, H413

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Mixture contains one or more component(s) which have the following color(s): Colourless Colourless to light yellow
Odor	:	There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Petroleum-like odour Sweet odour Aromatic odour Irritating/pungent odour Pleasant odour
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 200 °C
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	0.888
Density	:	7.419 lb/gal
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	1276 mm²/s
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

Hub Oil	
Viscosity, kinematic	1276 mm²/s

Symptoms/effects after inhalation	:	None under normal conditions.
Symptoms/effects after skin contact	:	None under normal conditions.
Symptoms/effects after eye contact	:	None under normal conditions.
Symptoms/effects after ingestion	:	None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

12.2. Persistence and degradability

Hub Oil	
Persistence and degradability	Not rapidly degradable

Sulfurized olefin (Undisclosed)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.
Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Sulfurized olefin	CAS-No. Undisclosed	0.5 - 1.5*%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

WARNING: This product can expose you to Ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Revision date : 5/21/2026
Issue date : 7/9/2025

Full text of hazard classes and H-statements	
H227	Combustible liquid
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Hub Oil

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 7/9/2025 Revision date: 5/21/2026 Supersedes: 2/19/2026 Version: 3.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Hub Oil
Part Number : 10089

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Lubricating oil

1.4. Supplier's details

Lucas Oil Products, Inc.
3199 Harrison Way NW
Corydon, IN 47112
USA
T 800-342-2512
sds@lucasoil.com - www.LucasOil.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week. Within USA, Canada, Puerto Rico & US Virgin Islands: 1-800-255-3924. International: 1-813-248-0585 (collect calls accepted). Australia: 1-300-954-583. Brazil: 0-800-591-6042. China: 400-120-0751. India: 000-800-100-4086. Mexico: 800-099-0731.

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. Label elements

GHS US labeling

No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Sulfurized olefin	CAS-No.: Undisclosed	0.5 - 1.5*	Flam. Liq. 4, H227 Aquatic Chronic 4, H413

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Mixture contains one or more component(s) which have the following color(s): Colourless Colourless to light yellow
Odor	:	There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Petroleum-like odour Sweet odour Aromatic odour Irritating/pungent odour Pleasant odour
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 200 °C
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	0.888
Density	:	7.419 lb/gal
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	1276 mm²/s
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

Hub Oil	
Viscosity, kinematic	1276 mm²/s

Symptoms/effects after inhalation	:	None under normal conditions.
Symptoms/effects after skin contact	:	None under normal conditions.
Symptoms/effects after eye contact	:	None under normal conditions.
Symptoms/effects after ingestion	:	None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

12.2. Persistence and degradability

Hub Oil	
Persistence and degradability	Not rapidly degradable

Sulfurized olefin (Undisclosed)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.
Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Sulfurized olefin	CAS-No. Undisclosed	0.5 - 1.5*%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

WARNING: This product can expose you to Ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Revision date : 5/21/2026
Issue date : 7/9/2025

Full text of hazard classes and H-statements	
H227	Combustible liquid
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

Lucas Hub Oil

Section 1. Identification

GHS product identifier : Lucas Hub Oil

Other means of identification : Lucas Hub Oil

Product number : 10088, 20088, 10089, 10093, 10142, 10188

Relevant identified uses of the substance or mixture and uses advised against

Lubricanting Oil.

Supplier's details : Lucas Oil Products, Inc
302 North Sheridan Street
Corona, California 92880-2067
Toll Free: (800) 342-2512
Tel: (951) 270-0154
Fax: (951) 270-1902
Website: www.LucasOil.com

Emergency telephone number (with hours of operation) : (951) 493-1149
(951) 847-5949
Markn@lucasoil.com

7:00A.M. to 5:00P.M. Monday thru Friday

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Other means of identification	:	Lucas Hub Oil

CAS number/other identifiers

CAS number	:	Not applicable.
Product code	:	10088, 20088, 10089, 10093, 10142, 10188

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	Wash contaminated skin with soap and water. Get medical attention if symptoms occur.
Ingestion	:	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	No specific treatment.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	None known.
Specific hazards arising from the chemical	:	No specific fire or explosion hazard.
Hazardous thermal decomposition products	:	No specific data.
Special protective actions for fire-fighters	:	No special precaution is required.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid. [Amber.]
Color	:	Amber.
Odor	:	Petroleum /Sulfur.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point	:	Not available.
Boiling point	:	260°C (500°F)
Flash point	:	Closed cup: 221.111°C (430°F)
Burning time	:	Not applicable.
Burning rate	:	Not applicable.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	0.9123
Solubility	:	Not available.
Solubility in water	:	Negligible at 25°C
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Kinematic (40°C (104°F)): 0.85 cm^2/s (85 cSt)

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Excessive heat.
Incompatible materials	:	Reactive or incompatible with the following materials: Strong oxidizers.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

Skin : There is no data available.

Eyes : There is no data available.

Respiratory : There is no data available.

Sensitization

Skin : There is no data available.

Respiratory : There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available. Specific target organ toxicity (repeated exposure) There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Long term exposure

Potential immediate effects	:	No known significant effects or critical hazards.
Potential delayed effects	:	No known significant effects or critical hazards.

Potential chronic health effects

General	:	No known significant effects or critical hazards.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	:	No known significant effects or critical hazards.
Developmental effects	:	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC})	:	There is no data available.

Other adverse effects	:	No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods	:	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: All components are listed or exempted.
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Section 15. Regulatory information

Composition/information on ingredients

No products were found.

State regulations

Massachusetts	:	None of the components are listed.
New York	:	None of the components are listed.
New Jersey	:	The following components are listed: Lubricating oils, petroleum, c>25, hydrotreated bright stock-based
Pennsylvania	:	None of the components are listed.

California Prop. 65

No products were found.

International regulations

International lists	:	Australia inventory (AICS): All components are listed or exempted. China inventory (IECSC): All components are listed or exempted. Japan inventory: Not determined. Korea inventory: All components are listed or exempted. Malaysia Inventory (EHS Register): Not determined. New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted. Philippines inventory (PICCS): All components are listed or exempted. Taiwan inventory (CSNN): Not determined.
Chemical Weapons Convention List Schedule I Chemicals	:	Not listed
Chemical Weapons Convention List Schedule II Chemicals	:	Not listed
Chemical Weapons Convention List Schedule III Chemicals	:	Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 0 Flammability : 1 Physical hazards : 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 0 Flammability : 1 Instability : 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Section 16. Other information

Date of issue mm/dd/yyyy	:	06/15/2013
Version	:	1
Revised Section(s)	:	Not applicable.
Prepared by	:	KMK Regulatory Services Inc.
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

RED “N” TACKY® Grease

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 3/10/2025 Revision date: 8/6/2026 Supersedes: 7/14/2026 Version: 6.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : RED “N” TACKY® Grease
Part Number : 10005

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Lubricants, Greases and Release Products

1.4. Supplier's details

Lucas Oil Products, Inc.
3199 Harrison Way NW
Corydon, IN 47112
USA
T 800-342-2512
sds@lucasoil.com - www.LucasOil.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week. Within USA, Canada, Puerto Rico & US Virgin Islands: 1-800-255-3924. International: 1-813-248-0585 (collect calls accepted). Australia: 1-300-954-583. Brazil: 0-800-591-6042. China: 400-120-0751. India: 000-800-100-4086. Mexico: 800-099-0731.

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning
Hazard statements (GHS US) : H317 - May cause an allergic skin reaction
H361 - Suspected of damaging fertility or the unborn child
Precautionary statements (GHS US) : P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.

P308+P313 - If exposed or concerned: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	CAS-No.: 68584-23-6	3 - 7*	Skin Sens. 1B, H317
Sulfonic acids, petroleum, calcium salts	CAS-No.: 61789-86-4	1 - 5*	Skin Sens. 1B, H317
Calcium metaborate	CAS-No.: 13701-64-9	1 - 5*	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	CAS-No.: 70024-69-0	1 - 5*	Skin Sens. 1, H317
Benzenamine, ar-nonyl-N-(nonylphenyl)-	CAS-No.: 36878-20-3	0.1 - 1*	Repr. 2, H361 Aquatic Chronic 4, H413
1,3,4-Thiadiazole-2(3H)-thione, 5,5'-dithiobis-	CAS-No.: 72676-55-2	0.1 - 1*	Skin Sens. 1, H317 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.
Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.
For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.
Hygiene measures	:	Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	Store locked up.
Packaging materials	:	Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Solid

Color	:	Mixture contains one or more component(s) which have the following color(s): White Pure substance: colourless to white Unpurified: grey-blue or red Unpurified: grey-brown Pure substance: white Unpurified: yellow to brown Colourless to white Light yellow Colourless
Odor	:	There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Odourless Mild odour Vinegar odour Tar odour Characteristic odour
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	> 200 °C
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	0.898
Density	:	7.5 lb/gal
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Viscosity, kinematic	:	150 mm²/s @ 40 ° C
Explosion limits	:	Not applicable
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts (68584-23-6)	
LD50 oral rat	> 16000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:
LD50 dermal rabbit	> 4000 mg/kg body weight Animal: rabbit, Guideline: other:

Sulfonic acids, petroleum, calcium salts (61789-86-4)	
LD50 oral rat	> 16000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:
LD50 dermal rat	> 2000 mg/kg Source: International Uniform ChemicaL Information Database
LD50 dermal rabbit	> 4000 mg/kg body weight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 1.9 mg/l air Animal: rat, Guideline: EPA OPP 81-3 (Acute inhalation toxicity)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LD50 oral rat	> 16000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:
LD50 dermal rabbit	> 4000 mg/kg body weight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 1.9 mg/l air Animal: rat, Guideline: EPA OPP 81-3 (Acute inhalation toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 1.9 mg/l Source: ECHA

Calcium metaborate (13701-64-9)	
LD50 oral rat	> 2600 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LD50 dermal rabbit	> 2000 mg/kg body weight Animal: rabbit, Guideline: other:

Benzenamine, ar-nonyl-N-(nonylphenyl)- (36878-20-3)	
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

1,3,4-Thiadiazole-2(3H)-thione, 5,5'-dithiobis- (72676-55-2)	
LD50 dermal rabbit	> 2000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other:

Skin corrosion/irritation : Not classified

Sulfonic acids, petroleum, calcium salts (61789-86-4)	
pH	8

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem

Serious eye damage/irritation : Not classified

Sulfonic acids, petroleum, calcium salts (61789-86-4)	
pH	8

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified
Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified

Calcium metaborate (13701-64-9)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts (68584-23-6)	
NOAEL (oral,rat,90 days)	500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Sulfonic acids, petroleum, calcium salts (61789-86-4)	
NOAEL (oral,rat,90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
NOAEL (oral,rat,90 days)	500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard : Not classified

RED “N” TACKY® Grease	
Viscosity, kinematic	150 mm²/s @ 40 ° C

Symptoms/effects after inhalation : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts (68584-23-6)	
LC50 - Fish [1]	10000 mg/l Source: ECHA
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Sulfonic acids, petroleum, calcium salts (61789-86-4)	
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LC50 - Fish [1]	> 10000 mg/l Source: ECHA
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Calcium metaborate (13701-64-9)	
LC50 - Fish [1]	79.7 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	74 mg/l Test organisms (species): Limanda limanda
EC50 72h - Algae [1]	66 mg/l Test organisms (species): Phaeodactylum tricornutum
EC50 72h - Algae [2]	54 mg/l Test organisms (species): Phaeodactylum tricornutum
NOEC chronic fish	6.4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34 d'

Benzenamine, ar-nonyl-N-(nonylphenyl)- (36878-20-3)	
LC50 - Fish [1]	> 0.0013 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna

1,3,4-Thiadiazole-2(3H)-thione, 5,5'-dithiobis- (72676-55-2)	
EC50 - Crustacea [1]	3 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	20 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

RED “N” TACKY® Grease	
Persistence and degradability	Not rapidly degradable

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts (68584-23-6)	
Persistence and degradability	Not rapidly degradable

Sulfonic acids, petroleum, calcium salts (61789-86-4)	
Persistence and degradability	Not rapidly degradable

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Persistence and degradability	Not rapidly degradable

Calcium metaborate (13701-64-9)	
Persistence and degradability	Not rapidly degradable

Benzenamine, ar-nonyl-N-(nonylphenyl)- (36878-20-3)	
Persistence and degradability	Not rapidly degradable

1,3,4-Thiadiazole-2(3H)-thione, 5,5'-dithiobis- (72676-55-2)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts (68584-23-6)	
Partition coefficient n-octanol/water (Log Pow)	> 4.46 Source: ECHA

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Partition coefficient n-octanol/water (Log Pow)	> 5.47 Source: ECHA

12.4. Mobility in soil

Benzenamine, ar-nonyl-N-(nonylphenyl)- (36878-20-3)	
Mobility in soil	35900000 Source: EPISUITE

1,3,4-Thiadiazole-2(3H)-thione, 5,5'-dithiobis- (72676-55-2)	
Mobility in soil	518.5 Source: EPISUITE

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated

DOT	TDG	IMDG	IATA
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts (68584-23-6)

Listed on the Canadian DSL (Domestic Substances List)

Sulfonic acids, petroleum, calcium salts (61789-86-4)

Listed on the Canadian DSL (Domestic Substances List)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)

Listed on the Canadian DSL (Domestic Substances List)

Calcium metaborate (13701-64-9)

Listed on the Canadian DSL (Domestic Substances List)

Benzenamine, ar-nonyl-N-(nonylphenyl)- (36878-20-3)
Listed on the Canadian DSL (Domestic Substances List)

1,3,4-Thiadiazole-2(3H)-thione, 5,5'-dithiobis- (72676-55-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

1,3,4-Thiadiazole-2(3H)-thione, 5,5'-dithiobis- (72676-55-2)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

WARNING: This product can expose you to Naphthalene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Revision date : 8/6/2026

Issue date : 3/10/2025

Full text of hazard classes and H-statements	
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

Lucas SAE 80W-90 Gear Oil

Section 1. Identification

GHS product identifier : Lucas SAE 80W-90 Gear Oil

Other means of identification : Not available.

Product number : 10043, 10046, 10066, 10067, 10069

Relevant identified uses of the substance or mixture and uses advised against

Lubricating oil.

Supplier's details : Lucas Oil Products, Inc
302 North Sheridan Street
Corona, California 92880-2067
Toll Free: (800) 342-2512
Tel: (951) 270-0154
Fax: (951) 270-1902
Website: www.LucasOil.com

Emergency telephone number (with hours of operation) : (951) 493-1149
(951) 847-5949
Markn@lucasoil.com

7:00A.M. to 5:00P.M. Monday thru Friday

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

Ingredient name	%	CAS number
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based	30 - 60	72623-83-7
Dec-1-ene, oligomers, hydrogenated	10 - 30	68037-01-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : No special precaution is required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based	**ACGIH TLV (United States, 3/2012).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 6/2009).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours.

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear.]

Color : Amber.

Odor : Petroleum. Sulfur.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : >260°C (>500°F)

Flash point : Closed cup: 212.77°C (415°F)

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.9042

Solubility : Negligible at 25°C

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Kinematic (100°C (212°F)): 0.15 cm^2/s (15 cSt)

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

Skin : There is no data available.

Section 11. Toxicological information

Eyes : There is no data available.

Respiratory : There is no data available.

Sensitization

Skin : There is no data available.

Respiratory : There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

Name	Result
Lubricating oils, petroleum, c>25, hydrotreated bright stock-based Dec-1-ene, oligomers, hydrogenated	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Section 11. Toxicological information

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-

Section 14. Transport information

Environmental hazards	No.	No.	No.
Additional information	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: Antimony, dialkyl dithiocarbamate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Antimony, dialkyl dithiocarbamate	15890-25-2	1 - 5
Supplier notification	Antimony, dialkyl dithiocarbamate	15890-25-2	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

Section 15. Regulatory information

New Jersey : The following components are listed: Lubricating oils, petroleum, c>25, hydrotreated bright stock-based; Distillates (petroleum), hydrotreated heavy paraffinic; Distillates (petroleum), hydrotreated heavy naphthenic; Antimony, dialkyl dithiocarbamate

Pennsylvania : The following components are listed: Antimony, dialkyl dithiocarbamate

California Prop. 65

No products were found.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 0 **Flammability :** 1 **Physical hazards :** 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 0 **Flammability :** 1 **Instability :** 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue mm/dd/yyyy : 12/30/2012

Version : 1

Revised Section(s) : Not applicable.

Prepared by : KMK Regulatory Services Inc.

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Synthetic SAE 50 WT Motorcycle Oil

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 6/26/2025 Revision date: 5/13/2026 Supersedes: 12/2/2025 Version: 4.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Synthetic SAE 50 WT Motorcycle Oil
Part Number : 10765

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Lubricating oil

1.4. Supplier's details

Lucas Oil Products, Inc.
3199 Harrison Way NW
Corydon, IN 47112
USA
T 800-342-2512
sds@lucasoil.com - www.LucasOil.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week. Within USA, Canada, Puerto Rico & US Virgin Islands: 1-800-255-3924. International: 1-813-248-0585 (collect calls accepted). Australia: 1-300-954-583. Brazil: 0-800-591-6042. China: 400-120-0751. India: 000-800-100-4086. Mexico: 800-099-0731.

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412	Harmful to aquatic life with long lasting effects.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning
Hazard statements (GHS US) : H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (GHS US) : P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.
P337+P313 - If eye irritation persists: Get medical advice or attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	CAS-No.: 72623-87-1	45 - 70*	Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated heavy paraffinic	CAS-No.: 64742-54-7	7 - 13*	Asp. Tox. 1, H304 Aquatic Chronic 4, H413
1-Decene, homopolymer, hydrogenated	CAS-No.: 68037-01-4	5 - 10*	Asp. Tox. 1, H304
1-Dodecene, polymer with 1-decene, hydrogenated	CAS-No.: 151006-60-9	5 - 10*	Asp. Tox. 1, H304
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	CAS-No.: 68649-42-3	1 - 5*	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	CAS-No.: 70024-69-0	0.1 - 1*	Skin Sens. 1, H317

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : None under normal conditions. May cause an allergic skin reaction.

Symptoms/effects after eye contact : None under normal conditions. Eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep cool. Protect from sunlight.

Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

1-Decene, homopolymer, hydrogenated (68037-01-4)	
USA - ACGIH® - Threshold Limit Values	
ACGIH® TLV® TWA	5 mg/m³ (Inhalable fraction)

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Mixture contains one or more component(s) which have the following color(s): Colourless White to grey Yellow
Odor	:	There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Mild odour Characteristic odour Odourless Almost odourless
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 220 °C
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	0.861
Density	:	7.19 lb/gal
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	128.9 mm²/s @ 40 ° C
Explosion limits	:	No data available
Particle characteristics	:	Particle size : Not Applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 oral	5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg Source: IUCLID
LD50 dermal	5000 mg/kg
ATE US (oral)	5000 mg/kg body weight
ATE US (dermal)	5000 mg/kg body weight

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
LD50 oral rat	3195 mg/kg Source: ECHA
LD50 dermal rabbit	> 3160 mg/kg Source: ECHA
LC50 Inhalation - Rat	> 5 mg/l air Animal: rat, Guideline: other:
ATE US (oral)	3195 mg/kg body weight

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LD50 oral rat	> 16000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:
LD50 dermal rabbit	> 4000 mg/kg body weight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 1.9 mg/l air Animal: rat, Guideline: EPA OPP 81-3 (Acute inhalation toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 1.9 mg/l Source: ECHA

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LD50 dermal rabbit	> 5000 mg/kg Source: IUCLID

1-Decene, homopolymer, hydrogenated (68037-01-4)	
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
LD50 oral rat	> 5000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 3000 mg/kg Source: ECHA
LC50 Inhalation - Rat (Vapors)	0.9 mg/l Source: ECHA
ATE US (vapors)	0.9 mg/l/4h

Skin corrosion/irritation : Not classified

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
pH	5.5 – 7.5 Concentration: 1 vol%

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
pH	3.9 Source: ECHA

Serious eye damage/irritation : Causes serious eye irritation.

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
pH	5.5 – 7.5 Concentration: 1 vol%

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
pH	8.1 Source: ECHA Chem

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
pH	3.9 Source: ECHA

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
NOAEL (animal/female, F0/P)	300 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:
NOAEL (animal/female, F1)	1000 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
LOAEL (oral,rat,90 days)	125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation,rat,dust/mist/fume,90 days)	> 0.98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
NOAEL (oral,rat,90 days)	500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LOAEL (oral,rat,90 days)	125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation,rat,dust/mist/fume,90 days)	> 0.98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Aspiration hazard : Not classified

Synthetic SAE 50 WT Motorcycle Oil	
Viscosity, kinematic	128.9 mm²/s @ 40 ° C

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
Viscosity, kinematic	12 mm²/s
Hydrocarbon	Yes
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Viscosity, kinematic	9 – 15 mm²/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm²/s)'
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	18 mm²/s
Hydrocarbon	Yes
Aliphatic, alicyclic or aromatic hydrocarbon	Yes

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions. May cause an allergic skin reaction.
Symptoms/effects after eye contact : None under normal conditions. Eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Harmful to aquatic life with long lasting effects.

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
LC50 - Fish [1]	> 5000 mg/l Source: IUCLID
EC50 - Crustacea [1]	> 1000 mg/l Source: IUCLID

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
LC50 - Fish [1]	> 10000 mg/l Source: ECHA
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LC50 - Fish [1]	> 5000 mg/l
EC50 - Crustacea [1]	> 1000 mg/l Source: IUCLID
EC50 96h - Algae [1]	> 1000 mg/l Source: IUCLID

12.2. Persistence and degradability

Synthetic SAE 50 WT Motorcycle Oil	
Persistence and degradability	Not rapidly degradable

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
Persistence and degradability	Not rapidly degradable

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Persistence and degradability	Not rapidly degradable

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Persistence and degradability	Not rapidly degradable

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Persistence and degradability	Not rapidly degradable

1-Decene, homopolymer, hydrogenated (68037-01-4)	
Persistence and degradability	Biodegradability in water: no data available.

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
Partition coefficient n-octanol/water (Log Pow)	14.876 Source: ECHA

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)	
Partition coefficient n-octanol/water (Log Pow)	> 5.47 Source: ECHA

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID

1-Decene, homopolymer, hydrogenated (68037-01-4)	
Bioaccumulative potential	No bioaccumulation data available.

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)	
Partition coefficient n-octanol/water (Log Pow)	5

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)

Listed on the Canadian DSL (Domestic Substances List)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the Canadian DSL (Domestic Substances List)

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts (70024-69-0)

Listed on the Canadian DSL (Domestic Substances List)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Listed on the Canadian DSL (Domestic Substances List)

1-Decene, homopolymer, hydrogenated (68037-01-4)

Listed on the Canadian DSL (Domestic Substances List)

1-Dodecene, polymer with 1-decene, hydrogenated (151006-60-9)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

1-Decene, homopolymer, hydrogenated (68037-01-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Revision date : 5/13/2026

Issue date : 6/26/2025

Full text of hazard classes and H-statements	
H304	May be fatal if swallowed and enters airways

Full text of hazard classes and H-statements	
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name: **MAG 1 AIR COMP OIL 12/16OZ**
Product Code: MG06AC16

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Automotive Lubricants
Recommended restrictions: Not applicable

1.3. Details of the supplier of the safety data sheet

Manufacturer: Warren Distribution, Inc.
727 S. 13th Street
Omaha, NE 68102
Information Phone: +01 (800) 825-1235 +01 (402) 341-9397
E-mail: sds@wd-wpp.com

1.4. Emergency telephone number

Emergency phone number: CHEMTREC: +1 (800) 424-9300
International: +01 (703) 527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified under GHS

2.2. Label elements

2.3. Other hazards

Hazards not otherwise classified: Avoid prolonged or repeated skin contact with used fluid.

Unknown acute toxicity (GHS-US)

SECTION 3: Composition/information on ingredients

Chemical Name	%	CAS #	GHS Classification
Petroleum distillates, hydrotreated heavy paraffinic	100	64742-54-7	Acute Tox. 4; H332 Acute Tox. 3; H331

Components not listed are not physical or health hazards as defined in 29 CFR 1910.1200 (Hazard Communication Standard).

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.
Eyes None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard.
Skin Contact Wash with soap and water. Get medical attention if irritation develops or persists. Seek medical advice if symptoms persist.
Ingestion Minimal risk of harm if swallowed. Do not induce vomiting. Seek medical attention immediately. Provide medical care provider with this SDS.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Not determined

4.3. Indication of any immediate medical attention and special treatment needed

Note to Doctor Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach

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SECTION 4: First aid measures

contents is necessary, use method least likely to cause aspiration.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable and Unsuitable Extinguishing Media: Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do not direct a stream of water into the hot burning liquid.

5.2. Special hazards arising from the substance or mixture

Fire and/or Explosion Hazards Material may be ignited only if preheated to temperatures above the high flash point, for example in a fire.

5.3. Advice for firefighters

Fire Fighting Methods and Protection Do not enter fire area without proper protection including self- contained breathing apparatus and full protective equipment.Use methods for the surrounding fire.

Hazardous Combustion Products Carbon monoxide, Smoke

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General Measures: No data available.

6.2. Environmental precautions

Do not flush to sewer.

Avoid runoff into storm sewers and ditches that lead to waterways.

Remove from water surface by skimming or with suitable absorbents. Do not use dispersants.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Dispose of according to Federal, State, Local, or Provincial regulations. Used fluid should be disposed of at a recycling center.

6.4. Reference to other sections

Follow all protective equipment recommendations provided in Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No special handling instructions due to toxicity.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool dry place. Isolate from incompatible materials.

Incompatible materials

See Section 10.

7.3. Specific end use(s)

Automotive Lubricants

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	Occupational Exposure Limits	Value
Oil mist, mineral	OSHA PEL	5 mg/m3
Oil mist, mineral	ACGIH TLV-TWA	5 mg/m3
Oil mist, mineral	ACGIH STEL	10 mg/m3
None.	IDLH	
None.	OSHA PEL-Skin Notation	

8.2. Exposure controls

Engineering Measures Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Respiratory Protection Respiratory protection may be required to avoid overexposure when handling this product. General

8.2. Exposure controls

	or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.
Respirator Type(s)	None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.
Eye Protection	No special requirements under normal industrial use.
Skin Protection	Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Gloves	Neoprene, Nitrile

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	Liquid
Color	Amber
Odor	Mild
Odor threshold	Not determined
pH	Not determined
Freezing point	Not determined
Boiling Point	Not determined
Flash Point	233
Flash Point Method	COC
Evaporation Rate	Not determined
Upper Flammable/Explosive Limit, % in air	Not established
Lower Flammable/Explosive Limit, % in air	Not established
Flammability (solid, gas)	Not applicable
Vapor pressure	<0.20
Vapor Density	Not determined
Relative Density	0.88
Solubility in Water	Insoluble
Octanol/Water Partition Coefficient	Not determined
Autoignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity(°C)	112.38

9.2. Other information

Volatiles, % by weight	0.000000

SECTION 10: Stability and reactivity

10.1. Reactivity	No data available.
10.2. Chemical stability	Stable under normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerization will not occur.
10.4. Conditions to avoid	Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.Moisture (will lead to product performance degradation).
10.5. Incompatible materials	Strong oxidizing agents
10.6. Hazardous decomposition products	Carbon monoxide, Smoke

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Ingestion Toxicity	No hazard in normal industrial use.Estimated to be > 5.0 g/kg.
Skin Contact	Likely to be non-irritating to skin based on animal data.No hazard in normal industrial use.

SECTION 11: Toxicological information

Absorption	Likely to be practically non-toxic based on animal data.
Inhalation Toxicity	No hazard in normal industrial use. Likely to be practically non-toxic based on animal data.
Eye Contact	This material is likely to be non-irritating to eyes based on animal data. No hazard in normal industrial use.
Sensitization	Non-hazardous under Respiratory Sensitization category.No data available to indicate product or components may be a skin sensitizer.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.
Carcinogenicity	Not expected to cause cancer. This product meets the IP-346 criteria of <3% PAH's and is not considered a carcinogen by the International Agency for Research on Cancer.
Reproductive and Developmental Toxicity	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Specific target organ toxicity-Single exposure	Non-hazardous under Specific Target Organ Systemic Toxicity Single Exposure category.
Specific target organ toxicity-Repeated exposure	Non-hazardous under Specific Target Organ Systemic Toxicity Repeated Exposure category.
Aspiration toxicity	Non-hazardous under Aspiration category.
Other information	No data available.

Agents Classified by IARC Monographs

Not applicable	IARC Group 1
Not applicable	IARC Group 2A
Ethyl acrylate	IARC Group 2B

National Toxicity Program (NTP) Status

Not applicable	Known Human Carcinogen
Not applicable	Reasonably Anticipated To Be A Human Carcinogen

SECTION 12: Ecological information

12.1. Toxicity

Acute Aquatic ecotoxicity: Non-hazardous under Aquatic Acute Environment category.

Chronic Aquatic ecotoxicity: Non-hazardous under Aquatic Chronic Environment category.

12.2. Persistence and degradability

Biodegrades slowly.

12.3. Bioaccumulative potential

Bioconcentration may occur.

12.4. Mobility in soil

This material is expected to have essentially no mobility in soil. It absorbs strongly to most soil types.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

Not determined

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal Methods

Dispose of according to Federal, State, Local, or Provincial regulations. Recycle used oil.

Waste Disposal Code(s)

Waste Description for Spent Product

Spent or discarded material is non-hazardous according to environmental regulations.

Contaminated packaging:

Recycle containers whenever possible.

SECTION 14: Transport information

SAFETY DATA SHEET

SECTION 14: Transport information

DOT Basic Description Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO).

SECTION 15: Regulatory information

Chemical Inventories

TSCA Status All components of this material are on the US TSCA Inventory or are exempt.
U.S. State Restrictions: Not applicable
WHMIS: Uncontrolled product according to WHMIS classification criteria.

Chemical Name	Regulation	CAS #	%
None.	CERCLA		
Ethyl acrylate	SARA 313	140-88-5	0.001- 0.01
None.	SARA EHS		
None.	TSCA 12b		

U.S. State Regulations

Chemical Name	Regulation	CAS #	%
Ethyl acrylate	California Prop 65-Cancer	140-88-5	0.001- 0.01
None.	California Prop 65- Dev. Toxicity		
None.	California Prop 65-Reprod -fem		
None.	California Prop 65-Reprod-male		
None.	Massachusetts RTK List		
None.	New Jersey RTK List		
None.	Pennsylvania RTK List		
None.	Rhode Island RTK List		
None.	Minnesota Hazardous Substance List		

HMIS Ratings:		NFPA Ratings:	
Health:	0	Health:	0
Fire:	1	Fire:	1
Reactivity:	0	Reactivity:	0
PPE:	B		

KEY: 0 - Least 1 - Slight 2 - Moderate 3 - High 4 – Extreme

SECTION 16: Other information

Revision Date 4/2/2015 1:20:08 AM
Supersedes: 1/13/2015 4:26:04 PM
References ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
CFR: Code of Federal Regulations
DOT: United States Department of Transportation
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transportation Association
IDLH: Immediately Dangerous to Life or Health
IMDG: International Maritime Dangerous Goods
NFPA: National Fire Protection Association

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SAFETY DATA SHEET

SECTION 16: Other information

NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
RTK: Right-to-Know
SARA: Superfund Amendments and Reauthorization Act
STEL: Short-term Exposure Limit
TLV: Threshold limit value
TSCA: Toxic Substances Control Act
TWA: Time weighted average
UN: United Nations
WHMIS: Workplace Hazardous Materials Information System

Disclaimer

This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product in a safe manner and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

Safety Data Sheet

* * *Section 1 - IDENTIFICATION* * *

Product Identifier:

Manus Bond 64-A Premium

Recommended Use

adhesives / sealant

Restrictions on Use

None known.

Manufacturer Information

Manus Products, Inc.
866 Industrial Blvd. West
Waconia, MN 55387

Phone: (952) 442-3323

Emergency # (800) 424-9300

* * *Section 2 - HAZARD(S) IDENTIFICATION* * *

Classification in accordance with 29 CFR 1910.1200.

No classification is assigned, based on classification criteria. Review the entire data sheet for any additional information which did not result in a GHS classification.

GHS LABEL ELEMENTS

Symbol(s)

None

Signal Word

None

Hazard Statement(s)

None needed according to classification criteria.

Precautionary Statement(s)

Prevention

None needed according to classification criteria.

Response

None needed according to classification criteria.

Storage

None needed according to classification criteria.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * *Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS* * *

CAS	Component	Percent
1317-65-3	Calcium Carbonate	40-50
14807-96-6	Talc	18-22

* * *Section 4 - FIRST-AID MEASURES* * *

Description of Necessary Measures

Inhalation

Not a likely route of exposure. It is unlikely that emergency treatment will be required.

Skin Contact

Wash with plenty of soap and water. Get medical attention if irritation develops or persists.

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Eye Contact

Flush eyes with plenty of water. If eye irritation persists: Get medical advice/attention.

Ingestion

If a large amount is swallowed, get immediate medical attention.

Most Important Symptoms/Effects

Acute

skin irritation dermatitis eye irritation

Delayed

No information on significant adverse effects.

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

Treat symptomatically and supportively.

* * *Section 5 - FIRE-FIGHTING MEASURES* * *

Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water.

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

Hazardous Combustion Products

Combustion: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Special Protective Equipment and Precautions for Firefighters

May burn, but does not ignite readily.

Fire Fighting Measures

Move material from fire area if it can be done without risk. Cool containers with water. Avoid inhalation of vapors or combustion by-products.

Protective Equipment and Precautions for Firefighters

Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

* * *Section 6 - ACCIDENTAL RELEASE MEASURES* * *

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Collect spilled material in appropriate container for disposal.

* * *Section 7 - HANDLING AND STORAGE* * *

Precautions for Safe Handling

Avoid contact with skin and eyes. Wear personal protective clothing and equipment, see Section 8. Wash thoroughly after handling.

Conditions for Safe Storage, including any Incompatibilities

Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Keep separated from incompatible substances.

Incompatibilities: strong acids, strong bases, strong oxidizing materials

* * *Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION* * *

Component Exposure Limits

Calcium Carbonate (1317-65-3)

OSHA: 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)

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NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
Mexico 10 mg/m3 TWA LMPE-PPT
20 mg/m3 STEL [LMPE-CT]

Talc (14807-96-6)

ACGIH: 2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)
NIOSH: 2 mg/m3 TWA (containing no Asbestos and <1% Quartz, respirable dust)
Mexico 2 mg/m3 TWA LMPE-PPT (respirable fraction)

Appropriate Engineering Controls

Based on available information, additional ventilation is not required. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eyes/Face Protection

Wear safety goggles if eye contact is possible.

Skin Protection

Protective clothing is not required under normal conditions.

Glove Recommendations

Protective gloves are not required under normal conditions.

Respiratory Protection

Respiratory protection is not required under normal conditions of use.

Use an approved respirator if exposure limits are exceeded or if irritation develops or persists.

* * *Section 9 - PHYSICAL AND CHEMICAL PROPERTIES* * *

Physical State:	Solid	**Appearance:**	solid form
Physical Form:	Solid	**Odor:**	Not Available
Odor Threshold:	Not available	**pH:**	Not available
Melting Point:	Not available	**Boiling Point:**	Not available
Flash Point:	Not available	**Decomposition:**	Not available
Evaporation Rate:	Not available	**OSHA Flammability Class:**	Not available
Vapor Pressure:	Not available	**Vapor Density (air = 1):**	Not available
Density:	Not available	**Specific Gravity (water = 1):**	Not available
Water Solubility:	Negligible	**Log KOW:**	Not available
Coeff. Water/Oil Dist:	Not available	**KOC:**	Not available
Auto Ignition:	Not available	**Viscosity:**	Not available
VOC:	Not available	**Volatility:**	Not available
Molecular Formula:	Not available		

* * *Section 10 - STABILITY AND REACTIVITY* * *

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

strong acids, strong bases, strong oxidizing materials

Hazardous Decomposition Products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Hazardous Decomposition

Combustion: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

* * *Section 11 - TOXICOLOGICAL INFORMATION* * *

Acute Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

Information on Likely Routes of Exposure

Inhalation

No information available for the product.

Ingestion

Ingestion may cause irritation of the esophagus and gastrointestinal tract.

Skin Contact

May cause irritation of the skin. Repeated or prolonged contact may result in dermatitis.

Eye Contact

May cause irritation of the eyes. Contact may cause tearing, redness, a stinging or burning feeling, swelling, and blurred vision.

Immediate Effects

skin irritation eye irritation

Delayed Effects

No information is available.

Medical Conditions Aggravated by Exposure

skin disorders,eye disorders

Irritation/Corrosivity Data

May cause irritation of the skin and eyes.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Germ Cell Mutagenicity

No information available for the product.

Carcinogenicity

Component Carcinogenicity

Talc (14807-96-6)

ACGIH: A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers)

IARC: Monograph 93 [2010] (inhaled); Supplement 7 [1987]; Monograph 42 [1987] (Group 3 (not classifiable))

DFG: Category 3B (could be carcinogenic for man, free of asbestos fibers)

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

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Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration Hazard

No information available for the product.

* * *Section 12 - ECOLOGICAL INFORMATION* * *

Ecotoxicity

No information available for the product.

Component Analysis - Aquatic Toxicity

Talc (14807-96-6)

Fish: 96 Hr LC50 Brachydanio rerio: >100 g/L [semi-static]

Persistence and Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility

No information available for the product.

Biodegradation

No information available for the product.

* * *Section 13 - DISPOSAL CONSIDERATIONS* * *

Disposal Methods

Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

Disposal of Contaminated Packaging

Dispose of properly. Recycle if possible.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

* * *Section 14 - TRANSPORT INFORMATION* * *

US DOT Information

Not regulated as a hazardous material.

TDG Information

Not regulated as dangerous goods.

* * *Section 15 - REGULATORY INFORMATION* * *

U.S. Federal Regulations

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312 Hazardous Categories

Acute Health: No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactive:** No

State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Calcium Carbonate	1317-65-3	No	Yes	Yes	Yes	Yes
Talc	14807-96-6	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

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Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Calcium Carbonate	1317-65-3	Yes	NSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Talc	14807-96-6	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

* * *Section 16 - OTHER INFORMATION* * *

Summary of Changes

New SDS: 1.00

NFPA Ratings: Health: 1 **Fire:** 1 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations.

End of Sheet MAN-009

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Safety Data Sheet

Product Identifier: Manus Bond 65H **SDS ID: MAN-008**

* * *Section 1 - IDENTIFICATION* * *

Product Identifier:

Manus Bond 65H

Recommended Use

adhesives / sealant

Restrictions on Use

None known.

Manufacturer Information

Manus Products, Inc.
866 Industrial Blvd. West
Waconia, MN 55387

Phone: (952) 442-3323

Emergency # (800) 424-9300

* * *Section 2 - HAZARD(S) IDENTIFICATION* * *

Classification in accordance with 29 CFR 1910.1200.

Flammable Liquids, Category 3
Skin Corrosion / Irritation, Category 2
Eye Damage / Irritation, Category 2A
Hazardous to the Aquatic Environment - Acute Hazard, Category 3
Hazardous to the Aquatic Environment - Chronic Hazard, Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

WARNING

Hazard Statement(s)

Flammable liquid and vapor
Causes skin irritation
Causes serious eye irritation
Harmful to aquatic life with long lasting effects

Precautionary Statement(s)

Prevention

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Avoid release to the environment.

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Response

In case of fire: Use appropriate media for extinction. IF exposed or concerned: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * *Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS* * *

CAS	Component	Percent
64742-95-6	Solvent naphtha, petroleum, light aromatic	40-60
13463-67-7	Titanium dioxide	1-5
1317-65-3	Calcium Carbonate	1-5
63449-39-8	Chlorinated paraffin waxes and hydrocarbon waxes	1-5
1309-48-4	Magnesium oxide (MgO)	1-5
1333-86-4	Carbon black	0.01-0.09

* * *Section 4 - FIRST-AID MEASURES* * *

Description of Necessary Measures

Inhalation

IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin Contact

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated clothing before reuse.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

If a large amount is swallowed, get immediate medical attention.

Most Important Symptoms/Effects

Acute

skin irritation and eye irritation

Delayed

No information on significant adverse effects.

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

Treat symptomatically and supportively.

* * *Section 5 - FIRE-FIGHTING MEASURES* * *

Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water.

Unsuitable Extinguishing Media

None known.

FRS SDS Reference Library | S079 | Library page 855

Special Hazards Arising from the Chemical

Hazardous Combustion Products

Combustion: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Special Protective Equipment and Precautions for Firefighters

Flammable liquid and vapor.

Fire Fighting Measures

Move material from fire area if it can be done without risk. Cool containers with water. Avoid inhalation of vapors or combustion by-products. Use extinguishing agents appropriate for surrounding fire. Dike for later disposal. Stay upwind and keep out of low areas.

Protective Equipment and Precautions for Firefighters

Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

* * *Section 6 - ACCIDENTAL RELEASE MEASURES* * *

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Keep unnecessary people away, isolate hazard area and deny entry. Only personnel trained for the hazards of this material should perform clean up and disposal.

Methods and Materials for Containment and Cleaning Up

Eliminate all ignition sources if safe to do so. Ventilate the area. Stop leak if possible without personal risk. Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Avoid release to the environment.

* * *Section 7 - HANDLING AND STORAGE* * *

Precautions for Safe Handling

Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and flame. Take precautionary measures against static discharge. Do not breathe vapor or mist. Avoid contact with skin and eyes. Do not eat, drink, or smoke when using this product. Always wear recommended personal protective equipment. Wear personal protective clothing and equipment, see Section 8. Wash thoroughly after handling.

Conditions for Safe Storage, including any Incompatibilities

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep container tightly closed. Keep cool. Keep separated from incompatible substances.

Incompatibilities: strong oxidizing materials

* * *Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION* * *

Component Exposure Limits

Calcium Carbonate (1317-65-3)

OSHA: 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
Mexico 10 mg/m3 TWA LMPE-PPT
20 mg/m3 STEL [LMPE-CT]

Titanium dioxide (13463-67-7)

ACGIH: 10 mg/m3 TWA
OSHA: 15 mg/m3 TWA (total dust)
Mexico 10 mg/m3 TWA LMPE-PPT (as Ti)
20 mg/m3 STEL [LMPE-CT] (as Ti)

Magnesium oxide (MgO) (1309-48-4)

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ACGIH: 10 mg/m3 TWA (inhalable fraction)
OSHA: 15 mg/m3 TWA (fume, total particulate)
Mexico 10 mg/m3 TWA LMPE-PPT (as Mg, fume)

Carbon black (1333-86-4)

ACGIH: 3 mg/m3 TWA (inhalable fraction)
OSHA: 3.5 mg/m3 TWA
NIOSH: 3.5 mg/m3 TWA; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons, as PAH)
Mexico 3.5 mg/m3 TWA LMPE-PPT
7 mg/m3 STEL [LMPE-CT]

Appropriate Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eyes/Face Protection

Wear splash resistant safety goggles with a face-shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Respiratory Protection

Use an approved respirator if exposure limits are exceeded or if irritation develops or persists.

* * *Section 9 - PHYSICAL AND CHEMICAL PROPERTIES* * *

Physical State:	Liquid	**Appearance:**	paste
Color:	varies	**Physical Form:**	paste
Odor:	petroleum odor	**Odor Threshold:**	Not available
pH:	Not available	**Melting Point:**	Not available
Boiling Point:	161-171 °C (Solvent naphtha, petroleum, light aromatic)	**Decomposition:**	Not available
Flash Point:	>42 °C (Solvent naphtha, petroleum, light aromatic)	**Evaporation Rate:**	Not available
OSHA Flammability Class:	Not available	**Vapor Pressure:**	Not available
Vapor Density (air = 1):	Not available	**Density:**	Not available
Specific Gravity (water = 1):	0.95 – 1.05	**Water Solubility:**	Negligible
Log KOW:	Not available	**Coeff. Water/Oil Dist:**	Not available
KOC:	Not available	**Auto Ignition:**	Not available
Viscosity:	Not available	**VOC:**	Not available
Volatility:	Not available	**Molecular Formula:**	Not available

* * *Section 10 - STABILITY AND REACTIVITY* * *

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

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Incompatible Materials

strong oxidizing materials

Hazardous Decomposition Products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Hazardous Decomposition

Combustion: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

* * *Section 11 - TOXICOLOGICAL INFORMATION* * *

Acute Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Solvent naphtha, petroleum, light aromatic (64742-95-6)

Oral LD50 Rat 8400 mg/kg; Dermal LD50 Rabbit >2000 mg/kg; Inhalation LC50 Rat 3400 ppm 4 h

Titanium dioxide((13463-67-7)

Oral LD50 Rat >10000 mg/kg

Chlorinated paraffin waxes and hydrocarbon waxes (63449-39-8)

Oral LD50 Rat >21500 µL/kg

Carbon black (1333-86-4)

Oral LD50 Rat >15400 mg/kg

Information on Likely Routes of Exposure

Inhalation

May be harmful if inhaled.

Ingestion

May be harmful if swallowed.

Skin Contact

May cause irritation of the skin. May cause irritation, redness, itching and burning.

Eye Contact

May cause irritation of the eyes. Contact may cause tearing, redness, a stinging or burning feeling, swelling, and blurred vision.

Immediate Effects

skin irritation eye irritation

Delayed Effects

No information is available.

Medical Conditions Aggravated by Exposure

skin disorders,eye disorders

Irritation/Corrosivity Data

Causes skin, eye and respiratory irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Germ Cell Mutagenicity

No information available for the product.

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Carcinogenicity

Results of a DuPont epidemiology study showed that employees who had been exposed to titanium dioxide pigments were at no greater risk of developing lung cancer than were employees who had not been exposed to titanium dioxide pigments. No pulmonary fibrosis was found in any of the employees and no associations were observed between titanium dioxide pigment exposure and chronic respiratory disease or lung abnormalities. Based on the results of this study, DuPont concluded that titanium dioxide pigment will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.

Component Carcinogenicity

Titanium dioxide((13463-67-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 93 [2010]; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))
DFG: Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles)
OSHA: Present

Chlorinated paraffin waxes and hydrocarbon waxes (63449-39-8)

IARC: Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))
DFG: Category 3B (could be carcinogenic for man)
OSHA: Present

Magnesium oxide (MgO) (1309-48-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Carbon black (1333-86-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 93 [2010]; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG: Category 3B (could be carcinogenic for man, inhalable fraction)
OSHA: Present

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration Hazard

No information available for the product.

* * *Section 12 - ECOLOGICAL INFORMATION* * *

Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component Analysis - Aquatic Toxicity

Solvent naphtha, petroleum, light aromatic (64742-95-6)

Fish: 96 Hr LC50 Oncorhynchus mykiss: 9.22 mg/L
Invertebrate: 48 Hr EC50 Daphnia magna: 6.14 mg/L

Chlorinated paraffin waxes and hydrocarbon waxes (63449-39-8)

Fish: 96 Hr LC50 Lepomis macrochirus: >300 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: >0.0109 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 94.5 - 271 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: >0.1 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: >100 mg/L [static]

Persistence and Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility

No information available for the product.

Biodegradation

No information available for the product.

* * *Section 13 - DISPOSAL CONSIDERATIONS* * *

Disposal Methods

Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

Disposal of Contaminated Packaging

Dispose of properly. Recycle if possible.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

* * *Section 14 - TRANSPORT INFORMATION* * *

US DOT Information

Shipping Name: Petroleum distillates, n.o.s.
UN/NA #: UN1268 **Hazard Class:** 3 **Packing Group:** III
Required Label(s): 3
Additional Info.: Land Transportation: Combustible Liquid
For non-bulk shipments transported by motor vehicle or rail within the United States, this product would be reclassified as non-regulated.

TDG Information

Shipping Name: Petroleum distillates, n.o.s.
UN #: UN1268 **Hazard Class:** 3 **Packing Group:** III
Required Label(s): 3

* * *Section 15 - REGULATORY INFORMATION* * *

U.S. Federal Regulations

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

Acute Health: Yes **Chronic Health:** No **Fire:** Yes **Pressure:** No **Reactive:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Calcium Carbonate	1317-65-3	No	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	No	Yes	Yes	Yes	Yes
Chlorinated paraffin waxes and hydrocarbon waxes	63449-39-8	No	Yes	No	No	No
Magnesium oxide (MgO)	1309-48-4	Yes	Yes	Yes	Yes	Yes
Carbon black	1333-86-4	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer.

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Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Solvent naphtha, petroleum, light aromatic	64742-95-6	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes
Calcium Carbonate	1317-65-3	Yes	NSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Chlorinated paraffin waxes and hydrocarbon waxes	63449-39-8	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Magnesium oxide (MgO)	1309-48-4	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Carbon black	1333-86-4	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

* * *Section 16 - OTHER INFORMATION* * *

Summary of Changes

New SDS: 1.00

NFPA Ratings: Health: 2 **Fire:** 2 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations.

End of Sheet MAN-008

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Manus Bond 75-AM NSF61
Product Use
sealant
Restrictions on Use
None known
Details of the supplier of the safety data sheet
Manus Products, Inc.
866 Industrial Blvd. West
Waconia, MN 55387
Phone: (952) 442-3323
Emergency Phone #: (800) 424-9300

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Serious Eye Damage/Eye Irritation - Category 2A
Carcinogenicity - Category 2
Reproductive Toxicity - Category 1B
GHS Label Elements
Symbol(s)



Signal Word
Danger
Hazard Statement(s)
Causes serious eye irritation.
Suspected of causing cancer.
May damage fertility or the unborn child.
Precautionary Statement(s)
Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear eye protection/face protection.
Wash thoroughly after handling.
Response
IF exposed or concerned: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Storage
Store locked up.
Disposal

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Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
1317-65-3	Calcium carbonate	30-60
471-34-1	Carbonic acid, calcium salt (1:1)	10-30
68515-49-1	1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	5-10
13463-67-7	Titanium dioxide	0.1-1
77-58-7	Dibutyltin dilaurate	0.1-1
1333-86-4	Carbon black	<0.1

Section 4 - FIRST AID MEASURES

Inhalation
IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell.
Skin
IF ON SKIN. Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash before reuse.
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention
Ingestion
If a large amount is swallowed, get medical attention.
Most Important Symptoms/Effects
Acute
Causes serious eye irritation.
Delayed
Reproductive Effects. Suspected of causing cancer.
Note to Physicians
Treat symptomatically and supportively

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media
Use carbon dioxide, regular dry chemical, regular foam or water
Unsuitable Extinguishing Media
None known.
Hazardous Combustion Products
Oxides of carbon. various organic fragments.
Advice for firefighters

FRS SDS Reference Library | S080 | Library page 863

May burn, but does not ignite readily.

Fire Fighting Measures

Move material from fire area if it can be done without risk Cool containers with water spray until well after the fire is out. Use extinguishing agents appropriate for surrounding fire Dike for later disposal Stay upwind and keep out of low areas

Special Protective Equipment and Precautions for Firefighters

Wear protective clothing and equipment suitable for the surrounding fire, including helmet, face mask, and self-contained breathing apparatus.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Keep unnecessary people away, isolate hazard area and deny entry. Only personnel trained for the hazards of this material should perform clean up and disposal.

Methods and Materials for Containment and Cleaning Up

Ventilate the area. Stop leak if possible without personal risk. Absorb with earth, sand or other non-combustible material and transfer to container. Dispose in accordance with all applicable regulations.

Environmental Precautions

Do not flush into sanitary sewer systems, drains or surface water. Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Do not handle until all safety precautions have been read and understood. Avoid breathing vapor or mist. Avoid contact with eyes and skin. Do not eat, drink or smoke when using this product. Always wear recommended personal protective equipment. Wear personal protective clothing and equipment, see Section 8.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up.

Store and handle in accordance with all current regulations and standards Store in a cool dry place Store in a well-ventilated area Keep container tightly closed Empty containers may contain product residue Keep separated from incompatible substances

Incompatible Materials

Strong oxidizer.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Calcium carbonate	**1317-65-3**
NIOSH:	10 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable dust
OSHA (US):	15 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable fraction
Mexico:	10 mg/m3 TWA VLE-PPT
	20 mg/m3 STEL [PPT-CT]
Carbonic acid, calcium salt (1:1)	**471-34-1**

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NIOSH:	10 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable dust
Titanium dioxide	**13463-67-7**
ACGIH:	10 mg/m3 TWA
NIOSH:	2.4 mg/m3 TWA (CIB 63) fine ; 0.3 mg/m3 TWA (CIB 63) ultrafine, including engineered nanoscale
	5000 mg/m3 IDLH
OSHA (US):	15 mg/m3 TWA total dust
Mexico:	10 mg/m3 TWA VLE-PPT as Ti
	20 mg/m3 STEL [PPT-CT] as Ti
Carbon black	**1333-86-4**
ACGIH:	3 mg/m3 TWA inhalable particulate matter
NIOSH:	3.5 mg/m3 TWA ; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons) as PAH
	1750 mg/m3 IDLH
OSHA (US):	3.5 mg/m3 TWA
Mexico:	3.5 mg/m3 TWA VLE-PPT
	7 mg/m3 STEL [PPT-CT]

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)
There are no biological limit values for any of this product's components.
Engineering Controls
Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.
Individual Protection Measures, such as Personal Protective Equipment
Eye/face protection
Wear chemical safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin Protection
Wear appropriate chemical resistant clothing.
Respiratory Protection
In case of inadequate ventilation wear respiratory protection.
Glove Recommendations
Wear appropriate chemical resistant gloves

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	solid	**Physical State**	solid

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Odor	Not available	**Color**	Not available
Odor Threshold	Not available	**pH**	Not available
Melting Point	Not available	**Boiling Point**	Not available
Boiling Point Range	Not available	**Freezing point**	Not available
Evaporation Rate	Not available	**Flammability (solid, gas)**	Not available
Autoignition Temperature	Not available	**Flash Point**	Not available
Lower Explosive Limit	Not available	**Decomposition temperature**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	Not available
Vapor Density (air=1)	Not available	**Specific Gravity (water=1)**	Not available
Water Solubility	Not available	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Kinematic viscosity**	Not available
Solubility (Other)	Not available	**Density**	Not available
Physical Form	solid	**Molecular Weight**	Not available

Section 10 - STABILITY AND REACTIVITY

Reactivity
No reactivity hazard is expected
Chemical Stability
Stable at normal temperatures and pressure
Possibility of Hazardous Reactions
Will not polymerize
Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition Avoid contact with incompatible materials
Incompatible Materials
Strong oxidizer.
Hazardous decomposition products
oxides of carbon. various organic fragments.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Inhalation
May cause respiratory tract irritation.
Skin Contact
May cause skin irritation. Repeated exposure may cause skin dryness or cracking. May be absorbed through the skin.
Eye Contact
May cause irritation, redness, and stinging.

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Ingestion
May cause nausea, vomiting and stomach pain.
Acute and Chronic Toxicity
Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:
Carbonic acid, calcium salt (1:1) (471-34-1)
Oral LD50 Rat 6450 mg/kg
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich (68515-49-1)
Oral LD50 Rat >60000 mg/kg (no deaths occurred)
Dermal LD50 Rabbit 16000 mg/kg
Titanium dioxide (13463-67-7)
Oral LD50 Rat >10000 mg/kg
Dibutyltin dilaurate (77-58-7)
Oral LD50 Rat 45 mg/kg
Dermal LD50 Rabbit 630 mg/kg
Carbon black (1333-86-4)
Oral LD50 Rat >15400 mg/kg
Product Toxicity Data
Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Inhalation - Dust and Mist	> 5 mg/L
Oral	> 2000 mg/kg

Immediate Effects
Causes serious eye irritation.
Delayed Effects
Suspected of causing cancer. May damage fertility or the unborn child.
Irritation/Corrosivity Data
Causes serious eye irritation.
Respiratory Sensitization
No information available for the product.
Dermal Sensitization
No information available for the product.
Component Carcinogenicity

Titanium dioxide	**13463-67-7**
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 93 [2010] ; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3A (could be carcinogenic for man ;inhalable fraction with the exception of ultra small particles)
OSHA:	Present
NIOSH:	potential occupational carcinogen

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Carbon black	**1333-86-4**
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 93 [2010] ; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man ;inhalable fraction)
OSHA:	Present
NIOSH:	potential occupational carcinogen

Results of a DuPont epidemiology study showed that employees who had been exposed to titanium dioxide pigments were at no greater risk of developing lung cancer than were employees who had not been exposed to titanium dioxide pigments. No pulmonary fibrosis was found in any of the employees and no associations were observed between titanium dioxide pigment exposure and chronic respiratory disease or lung abnormalities. Based on the results of this study, DuPont concluded that titanium dioxide pigment will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.

Germ Cell Mutagenicity
No information available for the product.

Tumorigenic Data
No data available

Reproductive Toxicity
May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure
No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure
No target organs identified.

Aspiration hazard
No information available for the product

Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life with long lasting effects.

Component Analysis - Aquatic Toxicity

1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	**68515-49-1**
Fish:	LC50 96 h Pimephales promelas >0.66 mg/L [static]; LC50 96 h Pimephales promelas >1 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss >1 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.62 mg/L [flow-through]; LC50 96 h Lepomis macrochirus >0.55 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >1.3 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.18 mg/L IUCLID

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Persistence and Degradability
No information available for the product.
Bioaccumulative Potential
No information available for the product.
Mobility
No information available for the product.
Bioconcentration
No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable federal, state/regional and local laws and regulations.
Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not regulated.

International Bulk Chemical Code
This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Titanium dioxide	**13463-67-7**
IBC Code:	Category Z (slurry)

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories
Carcinogenicity; Reproductive Toxicity; Serious Eye Damage/Eye Irritation
U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Calcium carbonate	**1317-65-3**	No	Yes	Yes	Yes	Yes
Titanium dioxide	**13463-67-7**	No	Yes	Yes	Yes	Yes
Carbon black	**1333-86-4**	Yes	Yes	Yes	Yes	Yes

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

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WARNING

This product can expose you to chemicals including Titanium dioxide, Carbon black , which are known to the State of California to cause cancer and 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich , which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	**68515-49-1**
Repro/Dev. Tox	developmental toxicity , 4/20/2007
Titanium dioxide	**13463-67-7**
Carc:	carcinogen , 9/2/2011 (airborne, unbound particles of respirable size)
Carbon black	**1333-86-4**
Carc:	carcinogen , 2/21/2003 (airborne, unbound particles of respirable size)

Canada Regulations

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Dibutyltin dilaurate	**77-58-7**
	1 %
Carbon black	**1333-86-4**
	1 %

Component Analysis - Inventory

Calcium carbonate (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	NSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Carbonic acid, calcium salt (1:1) (471-34-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich (68515-49-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Titanium dioxide (13463-67-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Dibutyltin dilaurate (77-58-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Carbon black (1333-86-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

Preparation Date
8/13/2018
Key / Legend

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ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC – European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
MANUS-BOND 75-AM HV
Product Use
Adhesives. Sealant.
Restrictions on Use
None known.
Details of the supplier of the safety data sheet
Manus Products, Inc.
866 Industrial Blvd. West
Waconia, MN 55387
Phone: (952) 442-3323
Emergency Phone #: (800) 424-9300

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Acute Toxicity - Oral - Category 4
Serious Eye Damage/Eye Irritation - Category 2A
Carcinogenicity - Category 1A
Reproductive Toxicity - Category 1B
Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system)
Specific Target Organ Toxicity - Repeated Exposure - Category 1 (respiratory system)
Specific Target Organ Toxicity - Repeated Exposure - Category 2 (bladder)
GHS Label Elements
Symbol(s)



Signal Word
Danger
Hazard Statement(s)
Harmful if swallowed.
Causes serious eye irritation.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
May cause damage to organs through prolonged or repeated exposure.
Precautionary Statement(s)
Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear eye protection/face protection.

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Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response

If exposed: Call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
Get medical advice/attention if you feel unwell.
Specific treatment (see label).

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Statement(s) of Unknown Acute Toxicity

Oral 71.91% of the mixture consists of ingredient(s) of unknown acute toxicity.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
1317-65-3	Calcium carbonate	30-60
471-34-1	Carbonic acid, calcium salt (1:1)	15-40
13463-67-7	Titanium dioxide (White, Gray, Beige and Neutral only)	1-5
2768-02-7	Organosilane	1-5
818-08-6	Dibutyltin oxide	0.1-1
28553-12-0	Diisononyl phthalate	15-40
1333-86-4	Carbon black (*used in Black only)	0.05-<0.1

Section 4 - FIRST AID MEASURES

Inhalation

IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

IF ON SKIN Wash with plenty of soap and water If skin irritation or rash occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting

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Most Important Symptoms/Effects
Acute
Harmful if swallowed. Causes serious eye irritation.
Delayed
May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. May cause damage to organs through prolonged or repeated exposure.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media
Use carbon dioxide, regular dry chemical, regular foam or water.
Unsuitable Extinguishing Media
Do not use high-pressure water streams.
Special Hazards Arising from the Chemical
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Hazardous Combustion Products
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Advice for firefighters
Heating may cause an explosion. Containers may rupture or explode.
Fire Fighting Measures
Keep away from sources of ignition - No smoking Move material from fire area if it can be done without risk Avoid inhalation of vapors or combustion by-products. Dike for later disposal. Stay upwind and keep out of low areas.
Special Protective Equipment and Precautions for Firefighters
A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment, see Section 8.
Methods and Materials for Containment and Cleaning Up
Keep unnecessary people away, isolate hazard area and deny entry. In case of spillage, stop the flow of material and block any potential routes to water systems. Only personnel trained for the hazards of this material should perform clean up and disposal.
Environmental Precautions
Do not flush into sanitary sewer systems, drains or surface water. Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Do not handle until all safety precautions have been read and understood. Keep away from all ignition sources. Avoid contact with eyes and skin. Do not eat, drink or smoke when using this product. Always wear recommended personal protective equipment. Wear personal protective clothing and equipment, see Section 8. Take precautionary measures against static discharge.
Conditions for Safe Storage, Including any Incompatibilities
Store locked up.

Store in a cool dry place. Store in a well-ventilated area. Keep separated from incompatible substances. Keep container tightly closed. Empty containers may contain product residue. Store and handle in accordance with all current regulations and standards. Avoid contact with temperatures above 120 C.

Incompatible Materials

Strong oxidizer. strong acids.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Calcium carbonate	**1317-65-3**
NIOSH:	10 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable dust
OSHA (US):	15 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable fraction
Mexico:	10 mg/m3 TWA VLE-PPT
	20 mg/m3 STEL [PPT-CT]
Carbonic acid, calcium salt (1:1)	**471-34-1**
NIOSH:	10 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable dust
Titanium dioxide	**13463-67-7**
ACGIH:	10 mg/m3 TWA
NIOSH:	2.4 mg/m3 TWA (CIB 63) fine ; 0.3 mg/m3 TWA (CIB 63) ultrafine, including engineered nanoscale
	5000 mg/m3 IDLH
OSHA (US):	15 mg/m3 TWA total dust
Mexico:	10 mg/m3 TWA VLE-PPT as Ti
	20 mg/m3 STEL [PPT-CT] as Ti
Carbon black	**1333-86-4**
ACGIH:	3 mg/m3 TWA inhalable particulate matter
NIOSH:	3.5 mg/m3 TWA ; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons) as PAH
	1750 mg/m3 IDLH
OSHA (US):	3.5 mg/m3 TWA
Mexico:	3.5 mg/m3 TWA VLE-PPT

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	7 mg/m3 STEL [PPT-CT]

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)
There are no biological limit values for any of this product's components.
Engineering Controls
Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system.
Individual Protection Measures, such as Personal Protective Equipment
Eye/face protection
Wear splash resistant safety goggles with a faceshield.
Respiratory Protection
Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.
Glove Recommendations
Wear appropriate chemical resistant gloves.
Protective Materials
Wear appropriate chemical resistant clothing.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	paste	**Physical State**	solid
Odor	mild	**Color**	black , white , gray
Odor Threshold	Not available	**pH**	Not available
Melting Point	Not available	**Boiling Point**	Not available
Boiling Point Range	Not available	**Freezing point**	Not available
Evaporation Rate	Not available	**Flammability (solid, gas)**	Not available
Autoignition Temperature	Not available	**Flash Point**	93.3 °C (>200 °F)
Lower Explosive Limit	Not available	**Decomposition temperature**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	Not available
Vapor Density (air=1)	Not available	**Specific Gravity (water=1)**	1.3 - 1.7
Water Solubility	(Slightly soluble)	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Kinematic viscosity**	Not available
Solubility (Other)	Not available	**Density**	Not available
Physical Form	paste	**Molecular Weight**	Not available

Section 10 - STABILITY AND REACTIVITY

Reactivity

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No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials. Avoid contact with temperatures above 120 C.

Incompatible Materials

Strong acids. Strong oxidizer.

Hazardous decomposition products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May be harmful if inhaled.

Skin Contact

May cause skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

Harmful if swallowed.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Carbonic acid, calcium salt (1:1) (471-34-1)

Oral LD50 Rat 6450 mg/kg

Titanium dioxide (13463-67-7)

Oral LD50 Rat >10000 mg/kg

Organosilane (2768-02-7)

Oral LD50 Rat 7340 µL/kg

Dibutyltin oxide (818-08-6)

Oral LD50 Rat 44.9 mg/kg

Diisononyl phthalate (28553-12-0)

Oral LD50 Rat >9750 mg/kg

Inhalation LC50 Rat >4.4 mg/L 4 h (no deaths occurred)

Carbon black (1333-86-4)

Oral LD50 Rat >15400 mg/kg

Product Toxicity Data

Acute Toxicity Estimate

Oral	1261.241 mg/kg

Immediate Effects

Harmful if swallowed. Causes serious eye irritation.

Delayed Effects

May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. May cause damage to organs through prolonged or repeated exposure.

Irritation/Corrosivity Data

Causes serious eye irritation.

Respiratory Sensitization

No information on significant adverse effects.

Dermal Sensitization

No information on significant adverse effects.

Component Carcinogenicity

Titanium dioxide	**13463-67-7**
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 93 [2010] ; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3A (could be carcinogenic for man ;inhalable fraction with the exception of ultra small particles)
OSHA:	Present
NIOSH:	potential occupational carcinogen
Carbon black	**1333-86-4**
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 93 [2010] ; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man ;inhalable fraction)
OSHA:	Present
NIOSH:	potential occupational carcinogen

Results of a DuPont epidemiology study showed that employees who had been exposed to titanium dioxide pigments were at no greater risk of developing lung cancer than were employees who had not been exposed to titanium dioxide pigments. No pulmonary fibrosis was found in any of the employees and no associations were observed between titanium dioxide pigment exposure and chronic respiratory disease or lung abnormalities. Based on the results of this study, DuPont concluded that titanium dioxide pigment will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.

Germ Cell Mutagenicity

No information on significant adverse effects.

Tumorigenic Data

No information on significant adverse effects.

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Central nervous system.

Specific Target Organ Toxicity - Repeated Exposure

Respiratory system. Bladder.

Aspiration hazard
No information on significant adverse effects.
Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
May cause long lasting harmful effects to aquatic life.
Component Analysis - Aquatic Toxicity

Diisononyl phthalate	**28553-12-0**
Fish:	LC50 96 h Brachydanio rerio >100 mg/L [semi-static]; LC50 96 h Lepomis macrochirus >0.14 mg/L [flow-through]; LC50 96 h Lepomis macrochirus >0.17 mg/L [static]; LC50 96 h Pimephales promelas >0.19 mg/L [flow-through]; LC50 96 h Pimephales promelas >0.14 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus >500 mg/L IUCLID ; EC50 96 h Pseudokirchneriella subcapitata >1.8 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna >500 mg/L IUCLID ; EC50 48 h Daphnia magna >0.06 mg/L [Static] EPA

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable federal, state/regional and local laws and regulations.
Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Further information: Not regulated as dangerous goods

IATA Information:
Further information: Not regulated as dangerous goods

ICAO Information:
Further information: Not regulated as dangerous goods

IMDG Information:
Further information: Not regulated as dangerous goods
International Bulk Chemical Code
This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Titanium dioxide	**13463-67-7**

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IBC Code:	Category Z (slurry)

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories
Carcinogenicity; Acute toxicity; Reproductive Toxicity; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity
U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Calcium carbonate	**1317-65-3**	No	Yes	Yes	Yes	Yes
Titanium dioxide	**13463-67-7**	No	Yes	Yes	Yes	Yes
Carbon black	**1333-86-4**	Yes	Yes	Yes	Yes	Yes

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)



WARNING

This product can expose you to chemicals including Titanium dioxide, Diisononyl phthalate, Carbon black , which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Titanium dioxide	**13463-67-7**
Carc:	carcinogen , 9/2/2011 (airborne, unbound particles of respirable size)
Diisononyl phthalate	**28553-12-0**
Carc:	carcinogen , 12/20/2013
Carbon black	**1333-86-4**
Carc:	carcinogen , 2/21/2003 (airborne, unbound particles of respirable size)

Canada Regulations
Canadian WHMIS Ingredient Disclosure List (IDL)
Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Dibutyltin oxide	**818-08-6**

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	1 %
Carbon black	**1333-86-4**
	1 %

Component Analysis - Inventory
Calcium carbonate (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	NSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Carbonic acid, calcium salt (1:1) (471-34-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Titanium dioxide (13463-67-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Organosilane (2768-02-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes

Dibutyltin oxide (818-08-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)

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Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes

Diisononyl phthalate (28553-12-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Carbon black (1333-86-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings
Health: 2 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
Section 2 - HAZARDS IDENTIFICATION. Section 11 - TOXICOLOGICAL INFORMATION. Section 15 - REGULATORY INFORMATION. California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

Preparation Date
8/10/2018

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC – European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK

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- Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
MANUS-BOND 75-AM INDUSTRIAL GRADE
Product Use
Adhesives. Sealant.
Restrictions on Use
None known.
Details of the supplier of the safety data sheet
Manus Products, Inc.
866 Industrial Blvd. West
Waconia, MN 55387
Phone: (952) 442-3323
Emergency Phone #: (800) 424-9300

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Acute Toxicity - Oral - Category 4
Serious Eye Damage/Eye Irritation - Category 2A
Carcinogenicity - Category 1A
Reproductive Toxicity - Category 1B
Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system)
Specific Target Organ Toxicity - Repeated Exposure - Category 1 (respiratory system)
Specific Target Organ Toxicity - Repeated Exposure - Category 2 (bladder)
GHS Label Elements
Symbol(s)



Signal Word
Danger
Hazard Statement(s)
Harmful if swallowed.
Causes serious eye irritation.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
May cause damage to organs through prolonged or repeated exposure.
Precautionary Statement(s)
Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear eye protection/face protection.

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Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response

If exposed: Call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
Get medical advice/attention if you feel unwell.
Specific treatment (see label).

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Statement(s) of Unknown Acute Toxicity

Oral 71.91% of the mixture consists of ingredient(s) of unknown acute toxicity.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
1317-65-3	Calcium carbonate	30-60
471-34-1	Carbonic acid, calcium salt (1:1)	15-40
13463-67-7	Titanium dioxide (White, Gray, Beige and Neutral only)	1-5
2768-02-7	Organosilane	1-5
818-08-6	Dibutyltin oxide	0.1-1
28553-12-0	Diisononyl phthalate	15-40
1333-86-4	Carbon black (*used in Black only)	0.05-<0.1

Section 4 - FIRST AID MEASURES

Inhalation

IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

IF ON SKIN Wash with plenty of soap and water If skin irritation or rash occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting

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Most Important Symptoms/Effects
Acute
Harmful if swallowed. Causes serious eye irritation.
Delayed
May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. May cause damage to organs through prolonged or repeated exposure.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media
Use carbon dioxide, regular dry chemical, regular foam or water.
Unsuitable Extinguishing Media
Do not use high-pressure water streams.
Special Hazards Arising from the Chemical
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Hazardous Combustion Products
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Advice for firefighters
Heating may cause an explosion. Containers may rupture or explode.
Fire Fighting Measures
Keep away from sources of ignition - No smoking Move material from fire area if it can be done without risk Avoid inhalation of vapors or combustion by-products. Dike for later disposal. Stay upwind and keep out of low areas.
Special Protective Equipment and Precautions for Firefighters
A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment, see Section 8.
Methods and Materials for Containment and Cleaning Up
Keep unnecessary people away, isolate hazard area and deny entry. In case of spillage, stop the flow of material and block any potential routes to water systems. Only personnel trained for the hazards of this material should perform clean up and disposal.
Environmental Precautions
Do not flush into sanitary sewer systems, drains or surface water. Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Do not handle until all safety precautions have been read and understood. Keep away from all ignition sources. Avoid contact with eyes and skin. Do not eat, drink or smoke when using this product. Always wear recommended personal protective equipment. Wear personal protective clothing and equipment, see Section 8. Take precautionary measures against static discharge.
Conditions for Safe Storage, Including any Incompatibilities
Store locked up.

Store in a cool dry place. Store in a well-ventilated area. Keep separated from incompatible substances. Keep container tightly closed. Empty containers may contain product residue. Store and handle in accordance with all current regulations and standards. Avoid contact with temperatures above 120 C.

Incompatible Materials

Strong oxidizer. strong acids.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Calcium carbonate	**1317-65-3**
NIOSH:	10 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable dust
OSHA (US):	15 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable fraction
Mexico:	10 mg/m3 TWA VLE-PPT
	20 mg/m3 STEL [PPT-CT]
Carbonic acid, calcium salt (1:1)	**471-34-1**
NIOSH:	10 mg/m3 TWA total dust ; 5 mg/m3 TWA respirable dust
Titanium dioxide	**13463-67-7**
ACGIH:	10 mg/m3 TWA
NIOSH:	2.4 mg/m3 TWA (CIB 63) fine ; 0.3 mg/m3 TWA (CIB 63) ultrafine, including engineered nanoscale
	5000 mg/m3 IDLH
OSHA (US):	15 mg/m3 TWA total dust
Mexico:	10 mg/m3 TWA VLE-PPT as Ti
	20 mg/m3 STEL [PPT-CT] as Ti
Carbon black	**1333-86-4**
ACGIH:	3 mg/m3 TWA inhalable particulate matter
NIOSH:	3.5 mg/m3 TWA ; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons) as PAH
	1750 mg/m3 IDLH
OSHA (US):	3.5 mg/m3 TWA
Mexico:	3.5 mg/m3 TWA VLE-PPT

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	7 mg/m3 STEL [PPT-CT]

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)
There are no biological limit values for any of this product's components.
Engineering Controls
Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system.
Individual Protection Measures, such as Personal Protective Equipment
Eye/face protection
Wear splash resistant safety goggles with a faceshield.
Respiratory Protection
Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.
Glove Recommendations
Wear appropriate chemical resistant gloves.
Protective Materials
Wear appropriate chemical resistant clothing.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	paste	**Physical State**	solid
Odor	mild	**Color**	black , white , gray
Odor Threshold	Not available	**pH**	Not available
Melting Point	Not available	**Boiling Point**	Not available
Boiling Point Range	Not available	**Freezing point**	Not available
Evaporation Rate	Not available	**Flammability (solid, gas)**	Not available
Autoignition Temperature	Not available	**Flash Point**	93.3 °C (>200 °F)
Lower Explosive Limit	Not available	**Decomposition temperature**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	Not available
Vapor Density (air=1)	Not available	**Specific Gravity (water=1)**	1.3 - 1.7
Water Solubility	(Slightly soluble)	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Kinematic viscosity**	Not available
Solubility (Other)	Not available	**Density**	Not available
Physical Form	paste	**Molecular Weight**	Not available

Section 10 - STABILITY AND REACTIVITY

Reactivity

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No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials. Avoid contact with temperatures above 120 C.

Incompatible Materials

Strong acids. Strong oxidizer.

Hazardous decomposition products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May be harmful if inhaled.

Skin Contact

May cause skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

Harmful if swallowed.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Carbonic acid, calcium salt (1:1) (471-34-1)

Oral LD50 Rat 6450 mg/kg

Titanium dioxide (13463-67-7)

Oral LD50 Rat >10000 mg/kg

Organosilane (2768-02-7)

Oral LD50 Rat 7340 µL/kg

Dibutyltin oxide (818-08-6)

Oral LD50 Rat 44.9 mg/kg

Diisononyl phthalate (28553-12-0)

Oral LD50 Rat >9750 mg/kg

Inhalation LC50 Rat >4.4 mg/L 4 h (no deaths occurred)

Carbon black (1333-86-4)

Oral LD50 Rat >15400 mg/kg

Product Toxicity Data

Acute Toxicity Estimate

Oral	1261.241 mg/kg

Immediate Effects

Harmful if swallowed. Causes serious eye irritation.

Delayed Effects

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May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. May cause damage to organs through prolonged or repeated exposure.

Irritation/Corrosivity Data

Causes serious eye irritation.

Respiratory Sensitization

No information on significant adverse effects.

Dermal Sensitization

No information on significant adverse effects.

Component Carcinogenicity

Titanium dioxide	**13463-67-7**
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 93 [2010] ; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3A (could be carcinogenic for man ;inhalable fraction with the exception of ultra small particles)
OSHA:	Present
NIOSH:	potential occupational carcinogen
Carbon black	**1333-86-4**
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 93 [2010] ; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man ;inhalable fraction)
OSHA:	Present
NIOSH:	potential occupational carcinogen

Results of a DuPont epidemiology study showed that employees who had been exposed to titanium dioxide pigments were at no greater risk of developing lung cancer than were employees who had not been exposed to titanium dioxide pigments. No pulmonary fibrosis was found in any of the employees and no associations were observed between titanium dioxide pigment exposure and chronic respiratory disease or lung abnormalities. Based on the results of this study, DuPont concluded that titanium dioxide pigment will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.

Germ Cell Mutagenicity

No information on significant adverse effects.

Tumorigenic Data

No information on significant adverse effects.

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Central nervous system.

Specific Target Organ Toxicity - Repeated Exposure

Respiratory system. Bladder.

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Aspiration hazard
No information on significant adverse effects.
Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
May cause long lasting harmful effects to aquatic life.
Component Analysis - Aquatic Toxicity

Diisononyl phthalate	**28553-12-0**
Fish:	LC50 96 h Brachydanio rerio >100 mg/L [semi-static]; LC50 96 h Lepomis macrochirus >0.14 mg/L [flow-through]; LC50 96 h Lepomis macrochirus >0.17 mg/L [static]; LC50 96 h Pimephales promelas >0.19 mg/L [flow-through]; LC50 96 h Pimephales promelas >0.14 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus >500 mg/L IUCLID ; EC50 96 h Pseudokirchneriella subcapitata >1.8 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna >500 mg/L IUCLID ; EC50 48 h Daphnia magna >0.06 mg/L [Static] EPA

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable federal, state/regional and local laws and regulations.
Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Further information: Not regulated as dangerous goods

IATA Information:
Further information: Not regulated as dangerous goods

ICAO Information:
Further information: Not regulated as dangerous goods

IMDG Information:
Further information: Not regulated as dangerous goods
International Bulk Chemical Code
This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Titanium dioxide	**13463-67-7**

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IBC Code:	Category Z (slurry)

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories
Carcinogenicity; Acute toxicity; Reproductive Toxicity; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity
U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Calcium carbonate	**1317-65-3**	No	Yes	Yes	Yes	Yes
Titanium dioxide	**13463-67-7**	No	Yes	Yes	Yes	Yes
Carbon black	**1333-86-4**	Yes	Yes	Yes	Yes	Yes

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)



WARNING

This product can expose you to chemicals including Titanium dioxide, Carbon black , which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Titanium dioxide	**13463-67-7**
Carc:	carcinogen , 9/2/2011 (airborne, unbound particles of respirable size)
Diisononyl phthalate	**28553-12-0**
Carc:	carcinogen , 12/20/2013
Carbon black	**1333-86-4**
Carc:	carcinogen , 2/21/2003 (airborne, unbound particles of respirable size)

Canada Regulations
Canadian WHMIS Ingredient Disclosure List (IDL)
Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Dibutyltin oxide	**818-08-6**

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	1 %
Carbon black	**1333-86-4**
	1 %

Component Analysis - Inventory
Calcium carbonate (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	NSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Carbonic acid, calcium salt (1:1) (471-34-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Titanium dioxide (13463-67-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Organosilane (2768-02-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes

Dibutyltin oxide (818-08-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)

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Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes

Diisononyl phthalate (28553-12-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Carbon black (1333-86-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings
Health: 2 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
Section 2 - HAZARDS IDENTIFICATION. Section 11 - TOXICOLOGICAL INFORMATION. Section 15 - REGULATORY INFORMATION. California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

Preparation Date
8/10/2021

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC – European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK

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- Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Safety Data Sheet
acc. to OSHA HCS

1 Identification

· **Product identifier**

· **Trade name: MarkLine The Autowriter (All colors)**

· **Relevant identified uses of the substance or mixture and uses advised against**
Currently no such applications are identified.
· **Application of the substance / the mixture** Non-Permanent Valve Action Marker

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Genpack Industries Ltd.
26 Commercial Court, Calgary, Alberta, Canada, T3Z 2A5
1-888-657-3030

· **E-mail** info@genpack.ca

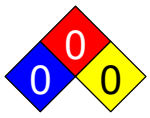
· **Contact Person** Customer Service

· **Emergency telephone number:** 1-800-535-5053 (North America 24/7/365)

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** none
· **Hazard pictograms** none
· **Signal word** none
· **Hazard statements** none
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
Mixture of the following substances, containing non-hazardous substances and colouring agents.
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:** none
· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

*

4 First-aid measures

· **Description of first aid measures**
· **General information:** No special measures required.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.

(Contd. on page 2)

Trade name: MarkLine The Autowriter (All colors)

(Contd. of page 1)

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

*
6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
· **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**
None of the ingredients is listed.

· **PAC-2:**
None of the ingredients is listed.

· **PAC-3:**
None of the ingredients is listed.

*
7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **Storage class:** 12
· **Specific end use(s)** No further relevant information available.

*
8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:** Not required.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
If only a short-term loading of the glove material by splashes is expected, tricoted gloves with higher wearability for the better acceptance of the users are recommended.

(Contd. on page 3)

Trade name: MarkLine The Autowriter (All colors)

(Contd. of page 2)

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Nitrile rubber, NBR
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	According to product specification
· **Odor:**	Product specific
· **Odor threshold:**	Not determined.
· **Important information on protection of health and environment, and on safety.**	-
· **pH-value at 20 °C (68 °F):**	7.2-9
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Not determined.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17.251 mm Hg)
· **Density at 20 °C (68 °F):**	1.18-1.4 g/cm³ (9.85-11.68 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic at 20 °C (68 °F):	30-55 mPas
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	Not determined
Water:	Not determined
Solids content:	Not determined
· **Other information**	The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.

(Contd. on page 4)

Trade name: MarkLine The Autowriter (All colors)

(Contd. of page 3)

· **Hazardous decomposition products:** No dangerous decomposition products known.

*
11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Smaller quantities can be disposed of with household waste.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, ADR, ADN, IMDG, IATA**	not applicable
· **UN proper shipping name**	
· **DOT, ADR, ADN, IMDG, IATA**	not applicable
· **Transport hazard class(es)**	
· **DOT, ADR, ADN, IMDG, IATA**	
· **Class**	not applicable
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	not applicable
· **Environmental hazards:**	Not applicable.

(Contd. on page 5)

Trade name: MarkLine The Autowriter (All colors)

(Contd. of page 4)

· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	not applicable

*

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All components have the value ACTIVE.

· **Hazardous Air Pollutants**
None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **DSL/NDSL (Canada)** All ingredients are listed

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**
None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements** none
· **Hazard pictograms** none
· **Signal word** none
· **Hazard statements** none

· **National regulations:**

· **Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:**
· **Date of preparation / last revision** 01/12/2026 / -
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value

(Contd. on page 6)

Trade name: MarkLine The Autowriter (All colors)

(Contd. of page 5)

PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

· *** Data compared to the previous version altered.**

US

Safety Data Sheet

according to WHMIS 2022 and HCS 2024

Date of issue 08/14/2026 Version number 4.00 Revision: 08/14/2026

* 1 Identification

· **Product identifier**

· **Trade name: Touch Up Spray Paint**

· **Related Part Number:**
TUSP-Aerosol, X????-ZE-300G, X????-ZE-340G, X????-ZE-140G, XS????-ZE-300G, XS????-ZE-340G, XS????-ZE-140G

· **Application of the substance / the mixture** Paint

· **Uses advised against** Not available

· **Details of the supplier of the safety data sheet**

·

Manufacturer/Supplier:
MG Chemicals (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 800-340-0772
+(1) 905-331-1396
info@mgchemicals.com

·

Distributor:
Masline
511 Clinton Ave S
Rochester, New York 14620
United States
+(1) 586-546-5373

· **Information department:** sds@mgchemicals.com

· **Emergency telephone number:**

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)
USA or CANADA-Call 3E at +1-866-519-4752 or +1-760-476-3962 (Service access code: 335388)

For emergencies involving the transport of dangerous goods; 24/7 service
CANADA-Call CANUTEC collect at +1-613-996-6666 or *666 on cellular phones

* 2 Hazard identification

· **Classification of the substance or mixture**

Aerosols, Section 2.3.1 – Category 1	H222	Extremely flammable aerosol.
	H229	Pressurized container: may burst if heated.
Skin Irritation - Category 2	H315	Causes skin irritation.
Eye damage/irritation – Category 2A	H319	Causes serious eye irritation.
Carcinogenicity – Category 2	H351	Suspected of causing cancer. Route of exposure: Inhalation.
Reproductive Toxicity - Category 2	H361	Suspected of damaging fertility or the unborn child.

(Contd. on page 2)

(Contd. of page 1)

Specific target organ toxicity (single exposure) – Category 3	H336	May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure) – Category 1	H372-H373	Causes damage to the central nervous system through prolonged or repeated exposure. May cause damage to the hearing organs through prolonged or repeated exposure.
Aspiration hazard – Category 1	H304	May be fatal if swallowed and enters airways.
Aquatic Acute 3	H402	Harmful to aquatic life.

· **Additional information:**
The full text of the classification and labeling elements mentioned is given in Section 16.

· **Label elements**

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
acetone
toluene
titanium dioxide
Stoddard solvent

· **Hazard statements**
H222 Extremely flammable aerosol.
H229 Pressurized container: may burst if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer. Route of exposure: Inhalation.
H361 Suspected of damaging fertility or the unborn child.
H336 May cause drowsiness or dizziness.
H372 Causes damage to the central nervous system through prolonged or repeated exposure.
H373 May cause damage to the hearing organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H402 Harmful to aquatic life.

· **Precautionary statements**

P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.

(Contd. on page 3)

(Contd. of page 2)

P260	Do not breathe mist, vapors, or spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P331	Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice.
P312	Call a POISON CENTER or doctor if you feel unwell.
P314	Get medical advice if you feel unwell.
P332+P313	If skin irritation occurs: Get medical advice.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice.
P403	Store in a well-ventilated place.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F).
P501	Dispose of contents and container in accordance with local, regional, and national regulations.

· **Other hazards**
Warning! May displace oxygen and cause rapid suffocation.
Repeated exposure may cause skin dryness or cracking.

3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
29118-24-9	(E)-1,3,3,3-tetrafluoroprop-1-ene HFO1234ze	47% w/w
67-64-1	acetone	15-18% w/w *
108-88-3	toluene	7-10% w/w *
108-65-6	2-methoxy-1-methylethyl acetate	3-5% w/w *
13463-67-7	titanium dioxide	1-5% w/w *
64-17-5	ethanol	1-3% w/w *
110-19-0	isobutyl acetate	1–3% w/w *
110-43-0	heptan-2-one	2-6% w/w *
141-78-6	ethyl acetate	0.5-1.5% w/w *
1330-20-7	xylene	0.5-1.5% w/w *
1333-86-4	Carbon black	0.5-1.5% w/w *

(Contd. on page 4)

(Contd. of page 3)

8052-41-3	Stoddard solvent	0.5-1.5% w/w *
100-41-4	ethylbenzene	0.1-1% w/w *

* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:**
If exposed or concerned: Get medical advice or attention
Remove person to fresh air and keep comfortable for breathing.
If feeling unwell: Call a POISON CENTRE or doctor.
· **After skin contact:**
Wash with plenty water.
If skin irritation or rash occurs: Get medical advice or attention.
Take off contaminated clothing and wash it before reuse.
· **After eye contact:**
Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice or attention.
· **After swallowing:**
A person vomiting while lying on their back should be turned onto their side.
Immediately call a POISON CENTRE/doctor.
Rinse mouth.
Do NOT induce vomiting.
· **Information for doctor:** Treat symptomatically

· **Most important symptoms and effects, both acute and delayed**
See section 11 for additional information.

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use water spray to cool containers.

· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Vapors are heavier than air. Vapors may travel to sources of ignition near the ground. They can cause flash fire or ignite explosively.
Prevent fire-fighting wash from entering waterway or sewer system.
Aerosols containers may erupt with force at temperatures above 50 °C [122 °F].
Produces irritating and toxic fumes in fires or in contact with hot surfaces.

(Contd. on page 5)

(Contd. of page 4)

· **Hazardous combustion products:**
Carbon Oxides (COx)
Halogenated compounds
Hydrogen flourides
other toxic fumes

· **Advice for firefighters**
· **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Remove or keep away all sources of extreme heat or open flames.
Do not breath mists, vapors, sprays or fumes

· **Environmental precautions:** Do not allow to enter sewers or into surface or ground water.

· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Collect liquid in a sealable, chemical-resistant container.
Wash residue with a paper towel and place dirty towels in container.
Use soap and water to remove the last traces of residue.

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Precautions for safe handling**
Wear protective gloves, clothing and eye protection.
Wash hands and exposed skin thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
Use only outdoors or in a well-ventilated area.
Obtain, read and follow all safety instructions before use.
Do not breathe mist, vapours, spray.
Do not eat, drink, or smoke when using this product.
Do not pierce or burn, even after use.

· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material.

(Contd. on page 6)

(Contd. of page 5)

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
Keep in a dry and clean area, away from incompatible substances
Store in a well-ventilated place. Keep cool.
· **Information about storage in one common storage facility:** Not required
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
Do not expose to temperatures exceeding 50 °C [122 °F].
Store locked up.

· **Specific end use(s)** See section 1.2

8 Exposure controls/ Personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-64-1 acetone	
EL (Canada)	STEL: 500 ppm TWA: 250 ppm
EV (Canada)	STEL: 750 ppm TWA: 500 ppm
PEL (USA)	TWA: 2400 mg/m³, 1000 ppm
REL (USA)	TWA: 590 mg/m³, 250 ppm
TLV (USA)	STEL: 1187 mg/m³, 500 ppm TWA: 594 mg/m³, 250 ppm A4, BEI
108-88-3 toluene	
EL (Canada)	TWA: 20 ppm R
EV (Canada)	TWA: 20 ppm
PEL (USA)	TWA: 200 ppm Ceiling: 300; 500* ppm *10-min peak per 8-hr shift
REL (USA)	STEL: 560 mg/m³, 150 ppm TWA: 375 mg/m³, 100 ppm
TLV (USA)	TWA: 20 ppm BEI, OTO, A4
108-65-6 2-methoxy-1-methylethyl acetate	
EL (Canada)	STEL: 75 ppm TWA: 50 ppm
EV (Canada)	TWA: 270 mg/m³, 50 ppm

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WEEL (USA)	TWA: 50 ppm
13463-67-7 titanium dioxide	
EL (Canada)	TWA: 10* 3** mg/m³ IARC 2B, +total dust;**resp. fraction
EV (Canada)	TWA: 10 mg/m³ total dust
PEL (USA)	TWA: 15* mg/m³ *total dust
REL (USA)	See Pocket Guide App. A
TLV (USA)	TWA: 0.2* 2.5** mg/m³ resp. fraction, *nanoscale,**finescale, A3
64-17-5 ethanol	
EL (Canada)	STEL: 1000 ppm
EV (Canada)	TWA: 1,900 mg/m³, 1,000 ppm
PEL (USA)	TWA: 1900 mg/m³, 1000 ppm
REL (USA)	TWA: 1900 mg/m³, 1000 ppm
TLV (USA)	STEL: 1880 mg/m³, 1000 ppm A3
110-19-0 isobutyl acetate	
EL (Canada)	STEL: 150 ppm TWA: 50 ppm
EV (Canada)	STEL: 187 ppm TWA: 150 ppm
PEL (USA)	TWA: 700 mg/m³, 150 ppm
REL (USA)	TWA: 700 mg/m³, 150 ppm
TLV (USA)	STEL: 712 mg/m³, 150 ppm TWA: 238 mg/m³, 50 ppm
110-43-0 heptan-2-one	
EL (Canada)	TWA: 50 ppm
EV (Canada)	TWA: 115 mg/m³, 25 ppm
PEL (USA)	TWA: 465 mg/m³, 100 ppm
REL (USA)	TWA: 465 mg/m³, 100 ppm
TLV (USA)	TWA: 50 ppm
141-78-6 ethyl acetate	
EL (Canada)	TWA: 150 ppm
EV (Canada)	TWA: 1,440 mg/m³, 400 ppm
PEL (USA)	TWA: 1400 mg/m³, 400 ppm
REL (USA)	TWA: 1400 mg/m³, 400 ppm
TLV (USA)	STEL: 200 ppm TWA: 100 ppm

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1330-20-7 xylene	
EL (Canada)	TWA: 20 ppm
EV (Canada)	STEL: 650 mg/m³, 150 ppm TWA: 435 mg/m³, 100 ppm
PEL (USA)	TWA: 435 mg/m³, 100 ppm
REL (USA)	STEL: 655 mg/m³, 150 ppm TWA: 435 mg/m³, 100 ppm
TLV (USA)	TWA: 20 ppm BEI, A4
1333-86-4 Carbon black	
EL (Canada)	TWA: 3 mg/m³ IARC 2B
EV (Canada)	TWA: 3.5 mg/m³
PEL (USA)	TWA: 3.5 mg/m³
REL (USA)	TWA: 3.5* mg/m³ *0.1 in presence of PAHs;See Pocket Guide Apps.A+C
TLV (USA)	TWA: 3* mg/m³ *inhalable fraction, A3
8052-41-3 Stoddard solvent	
EL (Canada)	STEL: 580 mg/m³ TWA: 290 mg/m³
PEL (USA)	TWA: 2900 mg/m³, 500 ppm
REL (USA)	TWA: 350 mg/m³ Ceiling: 1800* mg/m³ *15-min
TLV (USA)	TWA: 525 mg/m³, 100 ppm
100-41-4 ethylbenzene	
EL (Canada)	TWA: 20 ppm IARC 2B
EV (Canada)	STEL: 540 mg/m³, 125 ppm TWA: 435 mg/m³, 100 ppm
PEL (USA)	TWA: 435 mg/m³, 100 ppm
REL (USA)	STEL: 545 mg/m³, 125 ppm TWA: 435 mg/m³, 100 ppm
TLV (USA)	TWA: 20 ppm OTO, BEI, A3

· **Ingredients with biological limit values:**

67-64-1 acetone	
BEI (USA)	25 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)

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108-88-3 toluene	
BEI (USA)	0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene 0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene 0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)
1330-20-7 xylene	
BEI (USA)	0.3 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
100-41-4 ethylbenzene	
BEI (USA)	0.15 g/g creatinine Medium: urine Time: end of shift Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific)

· **Additional information:**
The lists that were valid during the creation were used as basis.
Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

· Exposure controls

· **Appropriate engineering controls** Keep airborne concentrations below exposure limits.

· **Personal protective equipment:**

· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Do not inhale gases, fumes or aerosols.
Avoid contact with the eyes and skin.

· **Breathing equipment:**
If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.
For over-exposures up to 10 x OEL of mist, vapors, and spray, wear respirator such as a half-mask respirator with organic vapor cartridges.
Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.
Advice should be sought from respiratory protection specialists.

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· **Protection of hands:**



Protective gloves: EN374

If exposure to the jet or liquid is likely, wear cold-insulating gloves to protect the skin against frostbites.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Safety glasses or tightly sealed goggles: EN 166

*
9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Physical state**	Aerosol
· **Form:**	Liquid, in aerosol format.
· **Color:**	According to product specification
· **Odor:**	Ether-like
· **Odor threshold:**	Not available
· **Boiling point/Boiling range:**	≥56 °C (≥132.8 °F)
· **Flammability:**	Flammable.
· **Explosion limits:**	
· **Lower:**	1.2 Vol %
· **Upper:**	13 Vol %
· **Flash point:**	-17 °C (1.4 °F)
· **Auto igniting:**	≥315 °C (≥599 °F)
· **Solubility in / Miscibility with**	
· **Water:**	Partly miscible.
· **Vapor pressure at 20 °C (68 °F):**	233 hPa (174.8 mm Hg)
· **Relative density at 25 °C (77 °F):**	0.8 - 0.9
· **Vapor density (air=1):**	Not available
· **Particle characteristics**	Not applicable

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· **Other information**
· **Important information on protection of health and environment, and on safety.**

· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Organic solvents:**	29.1–46 %
· **VOC content:**	29.1–46 % 280–310 g/l / 2.34–2.59 lb/gal
· **Solids content:**	25.4 %

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability** Chemically stable at normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** Temperatures above 50 °C, open flames, and incompatible substances

· **Incompatible materials:**
Oxidizing agents
Vinyl chloride
Iodine pentafluoride
Strong bases
Strong oxidizing agents
Phosphorous oxychloride
Alkali metals

· **Hazardous decomposition products:** Hazardous combustion products: see section 5.

* 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	16,756–126,753 mg/kg (rat)
Dermal	LD50	6,020–45,540 mg/kg
Inhalative	LC50/4 h	>74–663 mg/L

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29118-24-9 (E)-1,3,3,3-tetrafluoroprop-1-ene HFO1234ze		
Inhalative	LC50/4 h	207,000 mg/L (rat)
67-64-1 acetone		
Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	>7,426 mg/kg (rabbit)
Inhalative	LC50/ 3 h	132 mg/L (rat)
108-88-3 toluene		
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/L (mouse)
108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	8,532 mg/kg (rat)
Dermal	LD/50	5 g/kg (rabbit)
Inhalative	LC50/4 h	35.7 mg/L (rat)
13463-67-7 titanium dioxide		
Oral	LD50	>20,000 mg/kg (rat)
Dermal	LD50	>10,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.82 mg/L (rat)
64-17-5 ethanol		
Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/L (rat)
110-19-0 isobutyl acetate		
Oral	LD50	13,400 mg/kg (rat)
110-43-0 heptan-2-one		
Oral	LD50	1,670 mg/kg (rat)
Dermal	LD50	12,600 µL/kg (rabbit)
Inhalative	LC50/4 h	>16.7 mg/kg (rabbit)
141-78-6 ethyl acetate		
Oral	LD50	5,620 mg/kg (rabbit)
Inhalative	LC50/4 h	1,600 mg/L (rat)
1330-20-7 xylene		
Dermal	LD50	300 mg/kg (ATE)
Inhalative	LC50/4 h	11 mg/L (ATE)
1333-86-4 Carbon black		
Oral	LD50	>15,400 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rabbit)
100-41-4 ethylbenzene		
Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	17,800 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/L (ATE)

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· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Suspected of causing cancer. Route of exposure: Inhalation.
· **Reproductive toxicity** Suspected of damaging fertility or the unborn child.
· **Specific target organ toxicity - single exposure** May cause drowsiness or dizziness.
· **Specific target organ toxicity - repeated exposure**
Causes damage to the central nervous system through prolonged or repeated exposure. May cause damage to the hearing organs through prolonged or repeated exposure.
· **Aspiration hazard** May be fatal if swallowed and enters airways.

· **Summary of effects and symptoms by route of exposure**
· **Eyes:** redness, serious irritation
· **Skin:**
redness, irritation
dry skin
· **Inhalation:**
dizziness or drowsiness
cough
headache
nausea
Severe overexposure may lead to unconsciousness.
· **Swallowed:**
May cause aspiration into the lungs with the risk of chemical pneumonitis.
nausea
sore throat
diarrhea
· **Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Chronic inhalation exposure may affect the central nervous system and lead to hearing loss with co-exposure to loud noises.
Prolonged or repeated exposure may defat skin and cause skin dryness and cracking, and local redness and discomfort.
Ingestion or inhalation of paint material, mist, or vapor during pregnancy may increase the chances fetal death and developmental defects.

· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
108-88-3	toluene	3
13463-67-7	titanium dioxide	2B
64-17-5	ethanol	1
1330-20-7	xylene	3
1333-86-4	Carbon black	2B

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100-41-4	ethylbenzene	2B

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
67-64-1 acetone	
EC50/ 48 h	13,500 mg/L (daphnia)
LC50 96h	5,540 mg/L (trout)
108-88-3 toluene	
EC50/ 24 h	10 mg/L (algae)
	8.9 mg/L (water flea)
LC50 96h	7.63 mg/L (fish)
64-17-5 ethanol	
LC50	>1,000 mg/L (fish) Biodegradable
110-43-0 heptan-2-one	
EC50/ 48 h	>100 mg/L (daphnia)
LC50 96h	131 mg/L (minnow)
1333-86-4 Carbon black	
EC50/ 24 h	>5,600 mg/L (aquatic invertebrates)
EC50/ 72 h	>10,000 mg/L (aquatic algae and cyanobacteria)
EC0/ 3 h	>800 mg/L (microorganisms)
LC50	>1,000 mg/L (fish)
100-41-4 ethylbenzene	
LC50 96h	4.2 mg/L (trout)
LC50/ 48 h	2.9 mg/L (daphnia)

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable

· **vPvB:** Not applicable

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· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** This material and its container must be disposed of as hazardous waste.
· **Uncleaned packagings:**
· **Recommendation:**
Containers may still present a chemical hazard or danger when empty.
Dispose of contents in accordance with all local, regional, national, and international regulations.
Where possible retain label warnings and SDS and observe all notices pertaining to the product.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT/TDG, IMDG, IATA**	UN1950
· **UN proper shipping name**	
· **DOT/TDG, IATA**	Aerosols, flammable
· **IMDG**	AEROSOLS
· **Transport hazard class(es)**	
· **DOT/TDG (Transport dangerous goods):**	
	
· **Class**	2.1 Gases
· **Label**	2.1
· **IMDG, IATA**	
	
· **Class**	2.1 Gases
· **Label**	2.1
· **Packing group**	
· **DOT/TDG, IMDG, IATA**	Not applicable

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· **Environmental hazards:**	Not applicable
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable
· **Transport/Additional information:**	



Limited Quantity

· **DOT/TDG**
· **Quantity limitations** On passenger aircraft/rail: 75 kg
On cargo aircraft only: 150 kg

· **IMDG**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

· **Special precautions for user** Not applicable
· **Hazard identification number (Kemler code):** -
· **EMS Number:** F-D,S-U
· **Stowage Code** SW1 Protected from sources of heat.
SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· **Segregation Code** SG69 For AEROSOLS with a maximum capacity of 1 litre:
Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.
For AEROSOLS with a capacity above 1 litre:
Segregation as for the appropriate subdivision of class 2.
For WASTE AEROSOLS:
Segregation as for the appropriate subdivision of class 2.

· **UN "Model Regulation":** UN 1950 AEROSOLS, 2.1

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **OSHA Hazard Communication Standard (29 CFR Part 1900)**
The safety data sheet and label comply with HCS 2024.

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· **Hazardous Products Act (R.S.C., 1985, c. H-3)**
The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2022.

· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**	
108-88-3	toluene
100-41-4	ethylbenzene

· **TSCA (Toxic Substances Control Act):**		
29118-24-9	(E)-1,3,3,3-tetrafluoroprop-1-ene HFO1234ze	ACTIVE
67-64-1	acetone	ACTIVE
108-88-3	toluene	ACTIVE
108-65-6	2-methoxy-1-methylethyl acetate	ACTIVE
13463-67-7	titanium dioxide	ACTIVE
64-17-5	ethanol	ACTIVE
110-19-0	isobutyl acetate	ACTIVE
110-43-0	heptan-2-one	ACTIVE
141-78-6	ethyl acetate	ACTIVE
1333-86-4	Carbon black	ACTIVE
100-41-4	ethylbenzene	ACTIVE

· **Hazardous Air Pollutants**	
108-88-3	toluene
100-41-4	ethylbenzene

· **Proposition 65**

· **Chemicals known to cause cancer:**	
13463-67-7	titanium dioxide
1333-86-4	Carbon black
100-41-4	ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**	
108-88-3	toluene
64-17-5	ethanol

· **Note:**
While ethanol is present in this product, the Proposition 65 warning does NOT apply since this product is not an alcoholic beverage.

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· **Carcinogenic categories**

· **TLV (Threshold Limit Value)**		
67-64-1	acetone	A4
108-88-3	toluene	A4
13463-67-7	titanium dioxide	A4
64-17-5	ethanol	A3
1330-20-7	xylene	A4
1333-86-4	Carbon black	A4
100-41-4	ethylbenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
13463-67-7	titanium dioxide
1333-86-4	Carbon black

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**	
29118-24-9	(E)-1,3,3,3-tetrafluoroprop-1-ene HFO1234ze
67-64-1	acetone
108-88-3	toluene
108-65-6	2-methoxy-1-methylethyl acetate
13463-67-7	titanium dioxide
64-17-5	ethanol
110-19-0	isobutyl acetate
110-43-0	heptan-2-one
141-78-6	ethyl acetate
1333-86-4	Carbon black
8052-41-3	Stoddard solvent
100-41-4	ethylbenzene

· **Canadian Non-Domestic Substances List (NDSL)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**	
64-17-5	ethanol
100-41-4	ethylbenzene

· **Canadian Ingredient Disclosure list (limit 1%)**	
67-64-1	acetone
108-88-3	toluene
110-19-0	isobutyl acetate
110-43-0	heptan-2-one
141-78-6	ethyl acetate
1333-86-4	Carbon black

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8052-41-3	Stoddard solvent

· **HMIS-ratings (scale 0 - 4)**
Health = * 2
Fire = 3
Reactivity = 0

· **Europe**

· **RoHS (Restriction of Hazardous Substances Directive)**
This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

· **WEEE (Waste Electrical and Electronic Equipment Directive)**
This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

· **Per- and polyfluoroalkyl substances (PFAS)**	
29118-24-9	(E)-1,3,3,3-tetrafluoroprop-1-ene HFO1234ze

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Regulatory department
· **Contact:** sds@mgchemicals.com
· **Date of previous version** 09/12/2025
· **Version number of previous version:** 3.05
· **Date of preparation** 08/14/2026
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
· *** Data compared to the previous version altered.**

Product Information Sheet

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200.
This standard must be consulted for specific requirements.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lithium-ion Batteries - Rechargeable (All Models/All Types)

Drawing Number: 58-97-0500
Issue Date: 2024-01-02
Supersedes Date: 2023-01-30

Milwaukee Electric Tool Corporation
13135 West Lisbon Road
Brookfield, Wisconsin USA 53005-2550
www.milwaukeetool.com

Company Phone Number: 1-262-781-3600 or 1-800-729-3878=
Emergency Contact Number: 1-800-424-9300
Chemtrec: United States only
For International: +1-703-741-5970

SECTION 2: HAZARDS IDENTIFICATION

Health	Environmental	Physical
Eye Irritation: No classified hazards	**Acute Toxicity:** No classified hazards	**Flammable liquid**: No classified hazards
Skin Irritation: No classified hazards	**Chronic Toxicity:** No classified hazards	
Acute Toxicity, Oral: No classified hazards		
Acute Toxicity, Inhalation: No classified hazards		

GHS Label
No applicable labeling

Hazard Statements	Precautionary Statements
No exposure during routine handling of product	

CLASSIFIED HAZARDS

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200. This SDS contains valuable information for the safe handling and proper use of this product. Save this SDS for future reference.

OTHER HAZARDS

Flammable:

Organic components will burn if cell is incinerated. Combustion of cell contents may cause evolution of Hydrogen Fluoride.

Potential Health Effects:

Fluoride interferes with nerve impulse conduction causing severe pain or absence of sensations

WARNING:

No exposure during routine handling of product. Hydrofluoric Acid exposure during firefighting: This information is given for the use of professional fire fighters responding to a warehouse fire where fire from other materials may incinerate batteries. This section is provided solely in case of exposure, during firefighting, to the combustion by-products.

SECTION 3: COMPOSITION /INFORMATION OF INGREDIENTS

Chemical Name	CAS #	Concentration
Aluminum Foil	7429-90-5	0.1 - 10
Biphenyl (BP)	92-52-4	0.1 - 0.3
Copper Foil	7440-50-8	0.1 - 10
Linear & Cyclic Carbonate solvents	N/A	0 - 17
Graphite Powder/Carbon	7440-44-0	10 - 30
Metal Oxide or other Electrolyte (proprietary)	Confidential	10 - 50
Lithium Hexaflurophosphate ($LiPF_6$)	21324-40-3	0 - 5
Polyvinylidene Flouride (PVDF)	24937-79-9	0.1 - 5
Styrene Butadiene Rubber (SBR)	N/A	<5
Aluminum, Steel, Nickel and other inert materials	N/A	Remainder

SECTION 4: FIRST AID MEASURES

No exposure during routine handling of product. Risk of exposure occurs only if the battery is mechanically or electrically abused.

No effect under routine handling and use to eyes, skin or if inhaled. Ingestion is not likely, given the physical size and state of the cell. If swallowed, seek medical attention immediately.

If exposure to internal materials within cell due to damaged outer casing the following actions are recommended:

EYE CONTACT:

Flush with water for 15 minutes without rubbing and immediately seek medical attention.

SKIN CONTACT:

Wash area immediately with soap and water. If irritation continues see medical attention.

INHALATION:

Leave area immediately and move to fresh air and seek medical attention.

INGESTION:

If swallowed, contact POISON CONTROL CENTER immediately.

SECTION 5: FIRE FIGHTING MEASURES

NFPA 704 Hazard Class



HMIS



0 (Minimal)
1 (Slight)
2 (Moderate)
3 (Serious)
4 (Severe)

SUITABLE EXTINGUISHING MEDIA:

Water spray, carbon dioxide, dry chemical powder or appropriate foam. Use agent appropriate for surrounding materials.

UNSUITABLE EXTINGUISHING MEDIA:

None.

PRODUCTS OF COMBUSTION:

Organic components will burn if incinerated. Combustion of cell contents may cause evolution of Hydrogen Fluoride. In case of fire in an adjacent area, use water, CO2, or dry chemical extinguishers if cells are packed in their original containers since the fuel of the fire is basically paper products.

PROTECTION OF FIREFIGHTERS:

Hydrofluoric Acid exposure during firefighting: This information is given for the use of professional fire fighters responding to a warehouse fire where fire from other materials may incinerate batteries. This section is provided solely in case of exposure, during firefighting, to the combustion by-products.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Use standard industrial clothing in normal use. If handling large containers of cells wear steel-toed footwear.

ENVIRONMENTAL PRECAUTIONS:

No special precautions necessary.

METHODS FOR CONTAINMENT:

Transport container outdoors. Hold burned cells and fire cleanup solids for disposal as potential hazardous waste. Unburned cells are not hazardous waste. A fire with over 100 kg of cells burnt will likely require reporting to environmental officials. Always consult and obey all international, federal and local environmental laws.

METHODS FOR CLEAN-UP:

No data available

OTHER INFORMATION:

No data available

SECTION 7: HANDLING AND STORAGE

HANDLING:

Use only approved charging equipment. Do not disassemble battery or battery pack. Do not puncture, crush or dispose of in fire.

STORAGE:

Store in a cool, dry place away from sparks and flame. Keep below 125°C. Keep above -60°C. Charge between 0°C and 45°C.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	California Prop 65 Reg. Y/N	IARC/NTP Y/N
Aluminum Foil	TWA 5mg/m^3*	TWA 5mg/m^3*	N	N
Biphenyl (BP)	NA	NA	N	N
Copper Foil	NA	NA	N	N
Linear & Cyclic Carbonate solvents	NA	NA	N	N
Graphite Powder/Carbon	NA	NA	N	N
Metal Oxide or other Electrolyte (proprietary)	NA	NA	N	N
Lithium Hexaflurophosphate ($LiPF_6$)	NA	NA	N	N
Polyvinylidene Flouride (PVDF)	NA	NA	N	N
Styrene Butadiene Rubber (SBR)	NA	NA	N	N

Aluminum, Steel, Nickel and other inert materials	NA	NA	N	N

EYE PROTECTION:

Not necessary under conditions of normal use

SKIN PROTECTION:

Not necessary under conditions of normal use

RESPIRATORY PROTECTION:

Not necessary under conditions of normal use

ENGINEERING CONTROLS:

Not necessary under conditions of normal use

GENERAL HYGIENE CONSIDERATIONS:

Not necessary under conditions of normal use

EXPOSURE GUIDELINES:

Not necessary under conditions of normal use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Data represent typical values and are not intended to be specifications. NA=Not Applicable; ND=Not Determined

Physical state: ..... Solid
Colour: ..... NA
Odor: ..... Odorless
Odor Threshold: ..... NA
pH: ..... NA
Melting/Freezing Point: ..... NA
VOC Content: ..... NA
Boiling Point: ..... NA
Flash Point: ..... NA
Evaporation Rate: ..... NA
Specific Gravity: ..... NA
Viscosity: ..... NA
Upper Explosive Limits (vol % in air): ..... NA
Lower Explosive Limits (vol % in air): ..... NA
Vapor pressure: ..... NA
Vapor density: ..... NA
Relative density: ..... NA
Solubility: ..... NA
Partition Coefficient: ..... NA
Auto-ignition Temperature: ..... NA
Decomposition Temperature: ..... NA
Flammability (solid, gas): ..... Organic components will burn if cell is incinerated

SECTION 10: STABILITY AND REACTIVITY

INCOMPATIBLE MATERIALS:

Water, heat and strong acids.

DECOMPOSITION PRODUCTS MAY INCLUDE:

Hydrogen Fluoride, Phosphorus Oxides, Carbon Monoxide, Carbon Dioxide, Lithium Hydroxide, Manganese Oxides, Aluminum Oxide, possible fluoro-compounds, Carbon soot.

CONDITIONS TO AVOID:

Do not crush, puncture, incinerate, immerse in water or heat over 212°F (100°C). Steel casing slowly dissolves in strong mineral acids.

POLYMERIZATION:

Hazardous polymerization will not occur. Spontaneous decomposition will not occur at normal temperature.

CHEMICAL STABILITY:

This product is stable.

REACTIVITY:

Hazardous polymerization will not occur. Spontaneous decomposition will not occur at normal temperature.

SECTION 11: TOXICOLOGY INFORMATION

LIKELY ROUTES OF EXPOSURE: Inhalation, Eye and Skin contact

Eye contact, skin contact, skin absorption, inhalation only if burned. Hydrofluoric acid is extremely corrosive. Contact with hydrogen fluoride fumes is to be avoided. Permissible exposure limit is 3ppm. In case of contact with hydrogen fluoride fumes, immediately leave the area and seek first aid **and** emergency medical attention. Symptoms may have delayed onset. Fluoride ions penetrate skin readily causing destruction of deep tissue layers even bone. Fluoride interferes with nerve impulse conduction causing severe pain or absence of sensations. Immediately flush eyes or skin with water for at least 20 minutes to neutralize the acidity and remove some fluoride. Remove and destroy all contaminated clothing and permeable personal possessions. Before re-use, impermeable possessions should be soaked in benzalkonium chloride after washing. Following flushing of the affected areas, an iced aqueous solution of benzalkonium chloride or 2.5% calcium gluconate gel should be applied to react with the fluoride ion. Compresses and wraps may be used for areas where immersion is not practical. Medicated dressing should be changed every 2 minutes. Exposure to hydrofluoric acid fumes sufficient to cause pain requires immediate hospitalization for monitoring for pulmonary edema.

ACUTE SYMPTOMS AND EFFECTS:

Inhalation: No further toxicological data known
Eye contact: No further toxicological data known
Skin contact: No further toxicological data known
Ingestion: No further toxicological data known

OTHER:

No further data known.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

None in routine handling of product.

TOXICITY:

No data available

PERSISTENCE AND DEGRADABILITY (BIO PERSISTENCY & BIODEGRADABILITY):

None in routine handling of product.

POTENTIAL OF BIOACCUMULATION:

None in routine handling of product.

MOBILITY IN SOIL:

None in routine handling of product.

OTHER ADVERSE EFFECTS:

No data available

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SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL:

Dispose in accordance with appropriate regulations. Always consult and obey all international, federal, provincial/state and local hazardous waste disposal laws. Some jurisdictions require recycling of this spent product. Battery recycling is encouraged. Lithium-ion batteries are safe for disposal in the normal municipal waste stream since they are not defined by the federal government as hazardous waste. However, Lithium-ion batteries are recyclable.

This product does not contain mercury, cadmium or Lithium (metal).

DO NOT INCINERATE or subject battery cells to temperatures in excess of 212°F (100°C).

SECTION 14: TRANSPORTATION INFORMATION

U.S. DOT HAZARDOUS MATERIAL REGULATIONS (RE: GROUND TRANSPORT)

Proper Shipping Description:

UN3480 Lithium-ion batteries; UN3481 Lithium-ion batteries packed with or contained in equipment; Class 9.

Milwaukee Lithium-ion batteries are to be shipped in compliance with relevant requirements of HMR “49 CFR 173.185”.

CANADA TRANSPORT DANGEROUS GOODS (RE: GROUND TRANSPORT)

Proper Shipping Description:

UN3480 Lithium-ion batteries; UN3481 Lithium-ion batteries packed with or contained in equipment; Class 9.

Milwaukee Lithium-ion batteries are to be shipped in compliance with relevant requirements of TDG “Part 2” (Section 2.43), or TDG “Schedule 2” (Special Provision 34), as applicable.

INTERNATIONAL DANGEROUS GOODS REGULATIONS (RE: AIR, SEA, GROUND TRANSPORT)

Proper Shipping Description:

UN3480 Lithium-ion batteries; UN3481 Lithium-ion batteries packed with or contained in equipment; Class 9.

Milwaukee Lithium-ion batteries are to be shipped in compliance with relevant requirements of the following DG Regulations:

- ICAO Technical Instructions or IATA Dangerous Goods Regulations (65th Edition): Packing Instructions 965; 966; 967 (Section I, or Section II, as applicable).
- IMDG Code: Packing Instruction P903, or Special Provision 188, as applicable.
- UN Model Regulations on the Transport of Dangerous Goods: Packing Instruction P903, or Special Provision 188, as applicable.
- UN European Agreements (ADR/RID/ADN): Packing Instruction P903, or Special Provision 188, as applicable.
- Australian Dangerous Goods (ADG): Packing Instruction P903, or Special Provision 188, as applicable.

IMPORTANT: The proper classification, packaging, labeling, marking, and documentation requirements for shipping Lithium-ion batteries is dependent upon whether the particular batteries are:

a.) Rated at 100 Watt-hours (Wh) or less; or
b.) Rated at greater than 100Wh.

Generally, Lithium-ion batteries rated 100Wh or less are “excepted” from certain Class 9 DG requirements. Always check compliance of Lithium-ion battery consignments against the current regulations governing the chosen mode of transport. When in doubt, contact the carrier or other trained Dangerous Goods professional to confirm acceptability.

UN 38.3 BATTERY TRANSPORTATION TESTING:

Milwaukee rechargeable Lithium-ion batteries listed in Section 1 have passed the relevant transportation test requirements as described in the UN *Manual of Tests and Criteria*, Part III, section 38.3.

UN 38.3 Test Reports are maintained on file at the corporate headquarters of Milwaukee Electric Tool Corporation located at 13135 W. Lisbon Rd., Brookfield, WI, USA 53005.

SECTION 15: REGULATORY INFORMATION

GLOBAL INVENTORIES

TSCA: United States	See Sec. 14. Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.
DSL: Canada	See Sec. 14. Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.
ECL: Korea	Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.
PICCS: Philippines	Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.
ENCS: Japan	Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.
AICS: Australia	Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.
IECS: China	Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.
EINECS: European Union	Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub-section 38.3.

SARA 313 Information:

SARA Title III Section 313: This product does not contain regulated levels of any toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372.

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain regulated levels of any toxic chemical subject to the reporting requirements of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

WHMIS: Canadian Workplace

This product does not contain regulated levels of any toxic chemical subject to the reporting requirements

SECTION 16: OTHER INFORMATION

ABBREVIATIONS:

TSCA..... Toxic Substance Control Act
ICAO..... International Civil Aviation Organization
IMDG .....International Maritime Dangerous
OSHA..... Occupational Safety and Health
IARC/NTP .....International Agency for Research on Cancer/National Toxicology Program
SARA ..... Superfund Amendments and Reauthorization Act of 1986
ACGIH..... American Conference of Governmental Industrial Hygienists

NIOSH/MSHA ..... National Institute for Occupational Safety Health/
Mine Safety and Health Administration
WHMIS .....Workplace Hazardous Materials Information System

Prepared by: Milwaukee Electric Tool Corporation

The batteries referenced herein are considered exempt articles and are not subject to the OSHA Hazard Communication Standard; therefore, a SDS is not required. This sheet is being provided as a service to our customers.

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. ***MILWAUKEE ELECTRIC TOOL CORPORATION*** makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereto.

SAFETY DATA SHEET
Transformer Oil

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Transformer Oil

Product number 7851

Internal identification GHS22014

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Oil filled transformers and other electrical equipment

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier
Morris Lubricants
Castle Foregate
Shrewsbury
Shropshire
SY1 2EL
+44 (0) 1743 232200
+44 (0) 1743 353584
sds@morris-lubricants.co.uk

Manufacturer
MORRIS LUBRICANTS
Castle Foregate
Shrewsbury
Shropshire
SY1 2EL
UK
+44 (0) 1743 232200
+44 (0) 1743 353584
sds@morris-lubricants.co.uk

1.4. Emergency telephone number

Emergency telephone +44(0)1743 232200 (08.45 - 17.00 GMT)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Asp. Tox. 1 - H304

Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) -

2.2. Label elements

Transformer Oil

Pictogram



Signal word	Danger
Hazard statements	H304 May be fatal if swallowed and enters airways.
Precautionary statements	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P331 Do NOT induce vomiting. P405 Store locked up. P501a Dispose of contents/container to hazardous or special waste collection point.
Contains	Distillate (petroleum), hydrotreated light paraffinic, Distillates (petroleum), hydrotreated light naphthenic

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Distillate (petroleum), hydrotreated light paraffinic **60-100%**

CAS number: 64742-55-8 EC number: 265-158-7 REACH registration number: 01-2119487077-29-XXXX

Classification	Classification (67/548/EEC or 1999/45/EC)
Asp. Tox. 1 - H304	-

Distillates (petroleum), hydrotreated light naphthenic **10-30%**

CAS number: 64742-53-6 EC number: 265-156-6 REACH registration number: 01-2119480375-34-XXXX

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues.
Inhalation	If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Get medical attention if any discomfort continues. Do not induce vomiting. Product contains petroleum based material, which, if aspirated into the lungs may result in chemical pneumonia.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information	If aspiration into the lungs is suspected, eg when vomitting, admit to hospital immediately.

Transformer Oil

Inhalation Upper respiratory irritation.

Ingestion May cause discomfort if swallowed. The product contains mineral oil, which if aspirated into the lungs through vomitting after ingestion, may result in chemical pneumonia. May be fatal if swallowed and enters airways.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Irritation of eyes and mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Heat from fire could result in drums bursting

Hazardous combustion products Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3. Oxides of carbon. Oxides of nitrogen. Fire may also create other unidentified organic gases some of which may be toxic.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Environmental precautions Contain spillage with sand or earth. Avoid the spillage or runoff entering drains, sewers or watercourses. The product is insoluble in water and will spread on the water surface.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Contain spillage with sand or earth. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Avoid water contacting spilled material or leaking containers. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. In case of spillage on water prevent the spread by use of suitable barrier equipment

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Transformer Oil

Usage precautions Avoid spilling. Always remove oil with soap and water or skin cleaning agent, never use organic solvents. Do not use oil-contaminated clothing or shoes, and do not put rags moistened with oil into pockets.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Distillate (petroleum), hydrotreated light paraffinic

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³
ACGIH = American Conference of Governmental Industrial Hygienists.

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection Use barrier creams to prevent skin contact.

Hygiene measures Use engineering controls to reduce air contamination to permissible exposure level. Wash promptly with soap and water if skin becomes contaminated.

Respiratory protection No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

Thermal hazards Not anticipated under normal conditions of use. The product is combustible if heated excessively and an ignition source is applied.

Environmental exposure controls Do not allow product to contaminate land.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Transformer Oil

Colour	Light yellow
Odour	Odourless. Light Paraffinic
Odour threshold	Not determined.
pH	Not applicable.
Melting point	-52°C
Initial boiling point and range	>320°C @ 101.3 kPa
Flash point	148°C PMCC (Pensky-Martens closed cup).
Upper/lower flammability or explosive limits	Not known.
Other flammability	Product is not flammable but on excessive heating may become combustible.
Vapour pressure	<0.1 kPa @ 20°C
Vapour density	Not determined.
Relative density	0.887 @ 20°C
Solubility(ies)	Insoluble in water. Soluble in the following materials: Organic solvents.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	9.2 cSt @ 40°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Volatile organic compound	The product is a complex mixture, the majority of which would not be classed as a VOC. However it cannot be discounted that trace or low levels of VOC's may be present.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Unlikely to occur under normal conditions of use. Unlikely to occur.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Transformer Oil

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) Not expected to be highly toxic based on information of ingredients.

Acute toxicity - dermal

Notes (dermal LD_{50}) Not expected to be highly toxic based on information of ingredients.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Not determined. The product is unlikely to present any significant inhalation hazard at ambient temperatures and under normal conditions of use.

Serious eye damage/irritation

Serious eye damage/irritation May cause mild, short lasting discomfort to eyes.

Respiratory sensitisation

Respiratory sensitisation No evidence to suggest the product will be a respiratory sensitiser. Repeated exposure to oil mists may cause respiratory damage.

Skin sensitisation

Skin sensitisation Not expected to be a skin sensitizer based on information on components.

Reproductive toxicity

Reproductive toxicity - fertility No data available to suggest the product will cause reproductive toxicity.

Aspiration hazard

Aspiration hazard Kinematic viscosity <= 20.5 cSt @ 40 C. Aspiration hazard if swallowed.

General information This product has low toxicity. Only large quantities are likely to have adverse effects on human health.

Inhalation High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

Ingestion Swallowing significant quantities may cause discomfort, nausea, diarrhoea and irritation of the digestive tract. Aspiaration into the lungs (e.g. through vomiting) after ingestion can be hazardous with possible resultant chemically induced pneumonia. May be fatal if swallowed and enters airways.

Skin contact Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.

Eye contact May cause temporary eye irritation.

Acute and chronic health hazards Prolonged or repeated contact with used oil may cause serious skin diseases, such as dermatitis and skin cancer.

SECTION 12: Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Transformer Oil

12.2. Persistence and degradability

Persistence and degradability	The product is not classed as being readily biodegradable by OECD test methods but is considered inherently biodegradable.
Stability (hydrolysis)	The product is based on highly refined mineral oils that are considered stable to hydrolysis.
Biodegradation	The product is not considered readily biodegradeable, albeit the major constituents are expected to ultimately biodegrade.
Biological oxygen demand	Not determined.
Chemical oxygen demand	Not determined.

12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.
Partition coefficient	Not determined.

12.4. Mobility in soil

Mobility	The product is non-volatile. The product is insoluble in water and will spread on the water surface.
Henry's law constant	Not determined.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects	None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Waste class	European Waste Catalogue (EWC) number = 13 08 99* (waste not otherwise specified)

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

Transformer Oil

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Pollution Prevention and Control Act 1999. Special Waste regulations 1996. Control of Pollution (Oil Storage) (England) Regulations 2001 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Guidance	Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
All the ingredients are listed or exempt.

Canada - DSL/NDSL
All the ingredients are listed or exempt.

US - TSCA
All the ingredients are listed or exempt.

Korea - KECI
All the ingredients are listed or exempt.

China - IECSC
All the ingredients are listed or exempt.

Philippines – PICCS
All the ingredients are listed or exempt.

Transformer Oil

New Zealand - NZIOC

All the ingredients are listed or exempt.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	28/06/2017
Revision	2
Supersedes date	09/12/2015
SDS number	22014
Risk phrases in full	Not classified.
Hazard statements in full	H304 May be fatal if swallowed and enters airways.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

SAFETY DATA SHEET

Issue Date 18-Feb-2014 **Revision Date 2-Nov-2017** **Version** 2

1. IDENTIFICATION

GHS Product Identifier
Product Name Murphy's Concentrated Tire and Tube Mounting Compound

Other Means of Identification
SDS #
Chemical Formula 93-11LNF or 2006-5
Other Information

Recommended Use of the Chemical and Restrictions on Use
Recommended Use Tire Lubricant

Details of the Supplier of the Safety Data Sheet
Supplier Address
JTM Products, Inc.
31025 Carter Street
Solon, OH 44139
Tel. 440-287-2302
800-229-6744
Fax. 440-287-3095

Emergency Telephone Number
Emergency Telephone Chemtel 1-800-255-3924

2. HAZARDS IDENTIFICATION

Classification
This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

GHS classification
Hazard categories:
Skin Irritant 3
Eye irritation: Eye Irritant 2B

Label elements
Signal word: Warning

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Hazard statements

H316 Causes mild skin irritation.
H320 Causes eye irritation.

Precautionary statements

P264	Wash skin thoroughly after handling.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Components

CAS No.	Chemical Name	Quantity
7732-18-5	Water	60-70%
61788-65-6 EINECS 262-993-9	Potassium salt of vegetable oil (soap)	25-35%

Where range is displayed, the exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

Inhalation Move to fresh air. If symptoms persist, call a physician

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately

Skin Contact Wash off immediately with soap and water. If skin irritation persists, call a physician.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms

Direct contact with eyes may cause temporary irritation. Prolonged or repeated skin contact may cause irritation.

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Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Non-flammable

Specific Hazards Arising from the Chemical

No information available.

Hazardous Combustion Products

Sensitivity to Mechanical Impact None
Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Use personal protective equipment. Keep people away from and upwind of spill/leak.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological information

Methods and Material for Containment and Cleaning Up

Methods for Containment Dike to collect large liquid spills. Prevent leakage or spillage if safe to do so.

Methods for Cleaning Up Dam up. Soak up with inert absorbent material Place the bulk of any spilled material into properly labeled containers. Rinse any remaining material to sewage treatment facility. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Ensure adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Do not take internally.

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Conditions for Safe Storage, Including any Incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

Incompatible Materials Strong oxidizing agents. Strong bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Appropriate Engineering Controls

Engineering Controls Eyewash stations Showers Ventilation systems.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection Wear approved safety goggles.

Skin and Body Protection Lightweight protective clothing. Chemical resistant gloves, if needed, to avoid prolonged or repeated skin contact.

Respiratory Protection No special protective equipment required. If respirators are used, OSHA requires a written respiratory program that includes at least: medical certification training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

General Hygiene Considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended.

Control Parameters N.A.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Gel		
Appearance	Clear gel	**Odor**	Bland
Color	Amber	**Odor threshold**	Not determined

Property	**Values**	**Remarks – Method**
pH	11	
Melting point/freezing point	< 0° C/< 32° F	
Boiling point/boiling range	> 104° C/ > 220° F	
Flash point	Non-flammable	
Evaporation rate	Not applicable	
Flammability (solid, gas)	Not determined	

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Flammability Limits in Air

Upper Flammability Limits	Not applicable
Lower Flammability Limits	Not applicable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Specific Gravity	0.99
Water Solubility	Completely soluble
Solubility in other Solvents	Not determined
Partition Coefficient	Not determined
Autoignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	None
Oxidizing Properties	None

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions

Chemical Stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing

Conditions to Avoid
Contact with incompatible material

Incompatible Materials
Strong oxidizing agents

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on Likely Route of Exposure

Product Information

Inhalation	Not a likely route of exposure
Eye Contact	Causes eye irritation
Skin Contact	Causes mild skin irritation
Ingestion	Do not taste or swallow
Symptoms	Direct contact with eyes may cause temporary irritation. Prolonged or repeated contact may dry skin and cause irritation

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Numerical Measures of Toxicity – Product
The following values are calculated based on chapter 3.1 of the GHS document:
LD50 Oral 72,000 mg/kg; Acute toxicity estimate mg/kg mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

Persistence and Degradability
No information available.

Mobility
Not Determined.

Other Adverse Effects
Not Determined.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your supplier or a licensed contractor for detailed recommendations.

Contaminated Packaging Do not re-use empty containers. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT Not regulated
IATA Not regulated
IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories
TSCA All ingredients appear on inventory
DSL/NDSL All components of this product are listed or are exempt
EINECS/ELINCS - *European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances / not available (N.A.)*
ENCS – *Japan Existing and New Chemical Substances/not available (N.A.)*
IECSC – *China Inventory of Existing Chemical Substances/not available (N.A.)*
KECL – *Korean Existing and Evaluated Chemical Substances/not available (N.A.)*
PICCS – *Philippines Inventory of Chemicals and Chemical Substances/not available (N.A.)*

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Legend:

TSCA - *United States Toxic Substances Control Act Section 8(b) Inventory*
DSL/NDSL – *Canadian Domestic Substances List/Non-Domestic Substances* List
EINECS/ELINCS - *European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
ENCS – *Japan Existing and New Chemical Substances*
IECSC – *China Inventory of Existing Chemical Substances*
KECL – *Korean Existing and Evaluated Chemical Substances*
PICCS – *Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42): None known

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302): None Known

U.S. State Regulations

California Proposition 65

Diethanolamine <0.25%

U.S. State Right-to-Know Regulations: Not applicable

U.S. EPA Label Information

EPA Pesticide Registration Number: Not Applicable

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	1	0	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	0	0	Not determined

Issuance Date 18-Feb-2014
Revision Date 2-Nov-2017
Revision Note Section 2: Material reclassified as hazardous.

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

June 11, 2015

A message from National Standard Parts Associates, Inc.

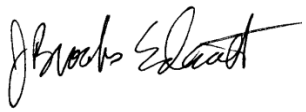
With OSHA's latest Hazard Communication Standard (HCS), revised in 2012, manufacturers provide a consistent 16-section format for communicating downstream information about hazardous chemicals in their products by published Safety Data Sheets (SDS). Only a subset of NSPA's heat shrink connectors contain a relevant solder alloy component (which contain both lead and cadmium) that requires the new labeling and Safety Data Sheets. Along with the part number listing below, the relevant SDS information from Alpha for these solder sleeves can be found in the following pages.

With the United States now transitioning to this new SDS format, 3M has replaced their old MSDS sheets with new Article Information Sheets for their heat shrink tubing (including the tubing that we use for our heat shrink connectors). NSPA can and will provide 3M's Article Information Sheet information upon request as a courtesy in response to a customer request; however, it is not required to be provided as part of OSHA's latest Hazard Communication Standard (HCS). The following statement outlines why 3M's tubing does not require a Safety Data Sheet as required for hazardous chemicals.

> *This Article Information Sheet is provided as a courtesy in response to a customer request. A Safety Data Sheet (SDS) has not been prepared for these product(s) because they are articles. Articles are not subject to the Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200(b)(6)(v)). As defined in this standard: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace Amounts of a hazardous chemical, and does not pose a physical or health risk to employees.*

To the best of our knowledge, the information contained herein is accurate; however, NSPA relies solely on the SDS information provided to us by our raw material suppliers. Neither Alpha nor NSPA assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described in the following SDS information, we cannot guarantee that these are the only hazards that exist.



J Brooks Endacott
President

National Standard Parts Associates, Inc. 1301 E. Belmont St, Pensacola, FL 32501 www.nspa.com

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Product Line	NSPA#	Description	SDS Product #
Sealed Solder Connectors	ELA110-10X	Ring 10-12 AWG #10 Stud	M351RS2.1
Sealed Solder Connectors	ELA110-12X	Ring 10-12 AWG 1/2" Stud	M351RS2.1
Sealed Solder Connectors	ELA110-14X	Ring 10-12 AWG 1/4" Stud	M351RS2.1
Sealed Solder Connectors	ELA110-38X	Ring 10-12 AWG 3/8" Stud	M351RS2.1
Sealed Solder Connectors	ELA110-516X	Ring 10-12 AWG 5/16" Stud	M351RS2.1
Sealed Solder Connectors	ELA120-02X	Ring 22-24 AWG #2 Stud	M351RS2.1
Sealed Solder Connectors	ELA120-04X	Ring 22-24 AWG #4 Stud	M351RS2.1
Sealed Solder Connectors	ELA120-06X	Ring 22-24 AWG #6 Stud	M351RS2.1
Sealed Solder Connectors	ELA210-10X	Spade 10-12 AWG #10 Stud	M351RS2.1
Sealed Solder Connectors	ELA220-02X	Spade 22-24 AWG #2 Stud	M351RS2.1
Sealed Solder Connectors	ELA220-04X	Spade 22-24 AWG #4 Stud	M351RS2.1
Sealed Solder Connectors	ELA220-06X	Spade 22-24 AWG #6 Stud	M351RS2.1
Sealed Solder Connectors	ELA5-14	Butt Connector 14-16 AWG	M351RS2.1
Sealed Solder Connectors	ELA5-16	Butt Connector 18-22 AWG	M351RS2.1
Sealed Solder Connectors	ELA5-20	Butt Connector 22-24 AWG	M351RS2.1
Sealed Solder Connectors	ELA6-10F	Female 10-12 AWG .250	M351RS2.1
Sealed Solder Connectors	ELA6-10FF	Fully-Insulated Female 10-12 AWG .250	M351RS2.1
Sealed Solder Connectors	ELA6-10M	Male 10-12 AWG .250	M351RS2.1
Sealed Crimp & Solder	ML5-14	Butt Connector 14-16 AWG	M351RS2.1
Sealed Crimp & Solder	ML5-16	Butt Connector 18-22 AWG	M351RS2.1
Sealed Crimp & Solder	ML5-20	Butt Connector 22-24 AWG	M351RS2.1
Sealed Crimp & Solder	ML56-16	Stepdown Butt 18-22 AWG to 14-16 AWG	M351RS2.1
Sealed Crimp & Solder	ML56-20	Stepdown Butt 22-24 AWG to 18-22 AWG	M351RS2.1

National Standard Parts Associates, Inc. 1301 E. Belmont St, Pensacola, FL 32501 www.nspa.com

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alpha

Safety Data Sheet

Safety Data Sheet

Section 1. Identification

Product name : **Preforms, Alloy Sn50/Pb32/Cd18, Coated with RS2.1 Flux**

Product code : M351RS2.1

Product type : Solid.

Date of issue/Date of revision : June 15 2015.

Manufacturer - Supplier	Telephone no.:	Fax no.	Emergency phone:
ALPHA Global Headquarters 300 Atrium Drive Somerset, New Jersey 08873	Toll Free: (800) 367-5460 Main Phone: (908) 791-3000	(908) 791-3090	UNITED STATES AND CANADA Tel: 800-424-9300 INTERNATIONAL, CALL Tel: +1 703-527-3887 (collect calls accepted) Alpha Chemtrec #5591
ALPHA METALS MEXICO SA DE CV Ave Nafta 800, Parque Industrial STIVA Apodaca NL 66600 Mexico	Tel: +52 81 1156-6602	Fax: +52 81 1156-6655	Tel: 01 800 022 1400 Tel: +52 55 5559-1588
Alent Brasil Soldas Ltda. Rio Jaguarão, 1540 - Vila Buriti Manaus Amazonas 69072-055 Brasil	Tel: 55 92 3614-7400	Fax: 55 92 3614-7400	Tel: 55 92 3614-7423

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture :
ACUTE TOXICITY (oral) - Category 4
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Fertility) - Category 1A
TOXIC TO REPRODUCTION (Unborn child) - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :
Harmful if swallowed.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Continued on next page

Section 2. Hazards identification

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response : Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
tin	40-50	7440-31-5
lead	30-40	7439-92-1
Cadmium (Non-pyrophoric)	10-20	7440-43-9
[1R-(1α,4aβ,10aα)]-1,2,3,4,4a,9,10,10a-octahydro-7-isopropyl-1,4a-dimethylphenanthren-1-carboxylic acid	1-10	1740-19-8
Proprietary Rosin/Resin	1-10	-
Modified Rosin/Resin	0.1-1.0	-

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Continued on next page

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Continued on next page

Section 5. Fire-fighting measures

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Continued on next page

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
tin	**OSHA PEL (United States, 9/2005).** TWA: 2 mg/m³ 8 hours. **ACGIH TLV (United States, 4/2014).** TWA: 2 mg/m³, (as Sn) 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 2 mg/m³, (as Sn) 10 hours.
lead	**OSHA PEL (United States, 5/2005).** TWA: 0.05 mg/m³ 8 hours. **ACGIH TLV (United States, 4/2014). Notes: as Pb** TWA: 0.05 mg/m³, (as Pb) 8 hours. **OSHA PEL (United States, 2/2013). Notes: as Pb** TWA: 50 µg/m³, (as Pb) 8 hours. **NIOSH REL (United States, 10/2013). Notes: See Appendix C - Supplemental Exposure Limits Note: The REL and PEL also apply to other lead compounds (as Pb).** TWA: 0.05 mg/m³ 10 hours.
Cadmium (Non-pyrophoric)	**OSHA PEL Z2 (United States, 2/2013).** TWA: 0.2 mg/m³ 8 hours. Form: Dust CEIL: 0.6 mg/m³ Form: Dust CEIL: 0.3 mg/m³ Form: Fume TWA: 0.1 mg/m³ 8 hours. Form: Fume **ACGIH TLV (United States, 4/2014).** TWA: 0.01 mg/m³, (as Cd) 8 hours. Form: Inhalable fraction **ACGIH TLV (United States, 4/2014). Notes: as Cd** TWA: 0.002 mg/m³, (as Cd) 8 hours. Form: Respirable fraction **OSHA PEL (United States, 2/2013). Notes: as Cd** TWA: 5 µg/m³, (as Cd) 8 hours.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Continued on next page

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid.

Color : Silver.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1

Solubility : Partially soluble in the following materials: cold water and hot water.

VOC : 10.2 g/l

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Incompatibility with various substances : Highly reactive or incompatible with the following materials: alkalis and moisture.
Reactive or incompatible with the following materials: acids.
Slightly reactive or incompatible with the following materials: oxidizing materials and reducing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Continued on next page

Section 11. Toxicological information

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
tin	LD50 Oral	Rat	>2000 mg/kg	-
lead	LD50 Oral	Rat	>5000 mg/kg	-
Cadmium (Non-pyrophoric)	LD50 Oral	Rat	225 mg/kg	-
[1R-(1α,4aβ,10aα)]-1,2,3,4,4a,9,10,10a-octahydro-7-isopropyl-1,4a-dimethylphenanthren-1-carboxylic acid	LD50 Oral	Rat	1710 mg/kg	-
Proprietary Rosin/Resin	LD50 Dermal	Rabbit	>2.5 g/kg	-
	LD50 Oral	Mouse	>3 g/kg	-
	LD50 Oral	Rat	>4 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
[1R-(1α,4aβ,10aα)]-1,2,3,4,4a,9,10,10a-octahydro-7-isopropyl-1,4a-dimethylphenanthren-1-carboxylic acid	Skin - Mild irritant	Guinea pig	-	72 hours 10 Percent	-

Sensitization

Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
lead	-	Subject: Mammalian-Animal	Equivocal
Cadmium (Non-pyrophoric)	-	Subject: Mammalian-Animal Cell: Germ	Equivocal
	-	Subject: Mammalian-Human	Equivocal

Carcinogenicity

No applicable toxicity data

Additional information:

Classification

Product/ingredient name	OSHA	IARC	NTP
lead	-	2B	Reasonably anticipated to be a human carcinogen.
Cadmium (Non-pyrophoric)	+	1	Known to be a human carcinogen.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
lead	-	-	Equivocal	Rat - Female	Oral: 520 mg/kg	-
	-	-	Equivocal	Rat - Female	Inhalation: 3 mg/m³	24 hours per day
	Equivocal	-	-	Mouse - Female	Oral: 300 mg/kg	-
	-	Equivocal	-	Mouse	Oral: 4099.2 mg/kg	-
Cadmium (Non-pyrophoric)	-	-	Equivocal	Rat - Male	Oral: 155 mg/kg	-
	-	-	Equivocal	Rat - Female	Oral: 220 mg/kg	-
	-	Equivocal	-	Rat - Female	Intraperitoneal:	-

Continued on next page

Section 11. Toxicological information

					1124 µg/kg	

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
lead	Equivocal - Oral	Mammal - species unspecified	2118 mg/kg	-
	Equivocal - Inhalation	Rat	10 mg/m³	24 hours per day
Cadmium (Non-pyrophoric)	Equivocal - Oral	Rat	23 mg/kg	-
	Equivocal - Intravenous	Rat	8 mg/kg	-

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
lead	Category 1	Not determined	nervous system and reproductive organs

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Continued on next page

Section 11. Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1104.1 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
lead	Acute EC50 105 ppb Marine water	Algae - Chaetoceros sp. - Exponential growth phase	72 hours
	Acute EC50 0.489 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 8000 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 530 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 5100 µg/l Fresh water	Daphnia - Daphnia pulex	48 hours
	Acute LC50 0.44 ppm Fresh water	Fish - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.25 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.03 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
Cadmium (Non-pyrophoric)	Acute EC50 97 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 0.095 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 200 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 24.4 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 2 µg/l Fresh water	Fish - Cyprinus carpio	96 hours
	Chronic NOEC 2 µg/l Fresh water	Algae - Parachlorella kessleri - Exponential growth phase	72 hours
	Chronic NOEC 0.02 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
[1R-(1α,4aβ,10aα)]-1,2,3,4,4a,9,10,10a-octahydro-7-isopropyl-1,4a-dimethylphenanthren-1-carboxylic acid	Acute LC50 2470 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 700 µg/l Fresh water	Fish - Esox lucius	96 hours
Proprietary Rosin/Resin	LC50 60.3 mg/l	Fish	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Continued on next page

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
[1R-(1α,4aβ,10aα)]-1,2,3,4,4a,9,10,10a-octahydro-7-isopropyl-1,4a-dimethylphenanthren-1-carboxylic acid	4.8	131.83	low
Proprietary Rosin/Resin	3.42	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Continued on next page

Section 15. Regulatory information

U.S. Federal regulations : TSCA 5(a)2 proposed significant new use rule (SNUR): No products were found.
TSCA 5(a)2 final significant new use rule (SNUR): No products were found.
TSCA 12(b) one-time export notification: No products were found.
TSCA 12(b) annual export notification: lead
Refer to Proposed Rule (59 Federal Register 11122, March 9, 1994) for details on TSCA 12(b) applicability for lead.

United States inventory (TSCA 8b) : All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	lead Cadmium (Non-pyrophoric)	7439-92-1 7440-43-9	30-40 10-20
Supplier notification	lead Cadmium (Non-pyrophoric)	7439-92-1 7440-43-9	30-40 10-20

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada

WHMIS (Canada) : Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class D-2A: Material causing other toxic effects (Very toxic).

Canada inventory : All components are listed or exempted.

International lists

National inventory

Europe : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	0
Physical hazards	0

Procedure used to derive the classification

Continued on next page

Section 16. Other information

Classification	Justification
Acute Tox. 4, H302	Calculation method
Carc. 1A, H350	Calculation method
Repr. 1A, H360 (Fertility)	Calculation method
Repr. 1A, H360 (Unborn child)	Calculation method
STOT RE 1, H372	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

History

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Prepared by : **Regulatory Affairs Department**
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Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	**Cal-Blue Plus Gas Leak Detector (4182-01, 4182-08, 4182-24, 4182-53)**
Other means of identification	Not available
Recommended use	Gas Leak Detector
Recommended restrictions	None known.
Manufacturer information	Nu-Calgon 2611 Schuetz Road St. Louis, MO 63043 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)
Supplier	See above.

2. Hazards Identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
WHMIS 2015 defined hazards	Not classified
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
1,2-Propanediol		57-55-6	10-30*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments	US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. *CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Inhalation	Not a normal route of exposure. If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire Fighting Measures

Suitable extinguishing media	Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep out of low areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Ensure adequate ventilation. Avoid prolonged exposure. Use care in handling/storage. Avoid contact with eyes, skin and clothing.
Conditions for safe storage, including any incompatibilities	Keep away from heat, open flames or other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
1,2-Propanediol (CAS 57-55-6)	TWA	155 mg/m3	Vapor and aerosol.
		10 mg/m3	Aerosol.
		50 ppm	Vapor and aerosol.

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
1,2-Propanediol (CAS 57-55-6)	TWA	10 mg/m3	Aerosol.

Biological limit values	No biological exposure limits noted for the ingredient(s).

Exposure guidelines	See above
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Safety goggles or glasses.
Skin protection	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Other	As required by employer code. Wear suitable protective clothing.
Respiratory protection	Not normally required if good ventilation is maintained. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
Thermal hazards	Not applicable.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid.
Color	Blue
Odor	Characteristic
Odor threshold	Not available.
pH	8.93
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.02
Partition coefficient (n-octanol/water)	Not available
Flash point	Not available.
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available
Flammability limit - upper (%)	Not available
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available
Vapor density	Not available
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available
Decomposition temperature	Not available.
Viscosity	325 - 425 cPs

10. Stability and Reactivity

Reactivity	This product may react with strong oxidizing agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.

Hazardous decomposition products May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Information on likely routes of exposure

Ingestion May cause stomach distress, nausea or vomiting.

Inhalation Prolonged inhalation may be harmful.

Skin contact No adverse effects due to skin contact are expected.

Eye contact Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
1,2-Propanediol (CAS 57-55-6)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
		20800 mg/kg
Inhalation		
LC50	Not available	
Oral		
LD50	Dog	19000 mg/kg
	Guinea pig	184000 mg/kg
		19700 mg/kg
	Mouse	24900 mg/kg
		23900 mg/kg
	Rabbit	14800 mg/kg
	Rat	22000 mg/kg
		20000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Teratogenicity Not available.

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
1,2-Propanediol (CAS 57-55-6)			
Crustacea	EC50	Daphnia	10000 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/L, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	710 mg/L, 96 hours

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

IATA/ICAO (Air)

Not regulated as dangerous goods.

IMDG (Marine Transport)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Not applicable

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

The chemical listed in Section 3 is on the TSCA Chemical Substances Inventory.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations See below

US - Minnesota Haz Subs: Listed substance

1,2-Propanediol (CAS 57-55-6) Listed.

US - New Jersey RTK - Substances: Listed substance

1,2-Propanediol (CAS 57-55-6)

US - Texas Effects Screening Levels: Listed substance

1,2-Propanediol (CAS 57-55-6) Listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law

1,2-Propanediol (CAS 57-55-6)

US. Rhode Island RTK

1,2-Propanediol (CAS 57-55-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Inventory status

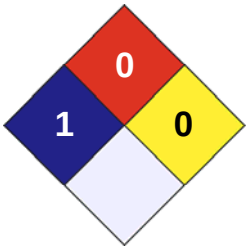
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.
Issue date	8-December-2024
Version #	01
Effective date	8-December-2024
Prepared by	Nu-Calgon Technical Service Phone: (314) 469-7000
Other information	For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2024 Version number 2.3 (replaces version 2.2) Revision: 03.01.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: **Paint Stripper**

Article number: 6000

1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.

Application of the substance / the mixture Paint remover
For removing synthetic resin varnishes, oil paints, thick-film glazes, architectural coatings.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Osmo Holz und Color GmbH & Co. KG
Affhüppen Esch 12
D-48231 Warendorf
Germany

Further information obtainable from: Product safety department
Tel.: +49 (0) 251 / 692 - 188
Fax: +49 (0) 251 / 692 - 462
e-mail: helmut.starp@osmo.de

1.4 Emergency telephone number: emergency phone no. Berlin (24h): +49 (0) 30 / 30686 790 advisory service in German and English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Additional information: For the wording of the listed hazard phrases refer to section 16.

2.2 Label elements

Hazard pictograms



GHS07

Signal word Warning

Hazard-determining components of labelling: 1-butylpyrrolidin-2-one
formic acid

Hazard statements H302 Harmful if swallowed.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2024 Version number 2.3 (replaces version 2.2) Revision: 03.01.2024

Trade name: Paint Stripper

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H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves / eye protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P501	Dispose of contents/container in accordance with national regulations.

2.3 Other hazards
Always wear a dust mask when sanding.
Observe the general safety regulations when handling chemicals.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

*

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 3470-98-2 EINECS: 222-437-8	1-butylpyrrolidin-2-one Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	10–25%
CAS: 64-18-6 EINECS: 200-579-1 Index number: 607-001-00-0	formic acid Skin Corr. 1A, H314; Acute Tox. 4, H302 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 90 % Skin Corr. 1B; H314: 10 % ≤ C < 90 % Skin Irrit. 2; H315: 2 % ≤ C < 10 % Eye Irrit. 2; H319: 2 % ≤ C < 10 %	<2%

SVHC Not applicable.
Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information: Immediately remove any clothing soiled by the product.
After inhalation: Take affected persons out into the fresh air.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
If skin irritation or rash occurs: Get medical advice/attention.

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Trade name: Paint Stripper

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After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

*

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO_2, powder or water spray. Fight larger fire with alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture Formation of gases harmful to health possible when heated or in the event of fire.
Do not inhale explosion gases or combustion gases.

5.3 Advice for firefighters

Protective equipment: General measures for chemical fires.

Additional information Collect contaminated fire fighting water separately. It must not enter the sewage system.
Cool endangered receptacles with water spray.

*

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Do not breathe vapour/spray.
Ensure adequate ventilation
Wear protective clothing.

For non-emergency personnel No action shall be taken involving any personal risk or without suitable training.

For emergency responders Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

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6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Dispose of the material collected according to regulations.
Warm water and cleansing agent

6.4 Reference to other sections See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*

SECTION 7: Handling and storage

7.1 Precautions for safe handling Avoid contact with skin and eyes.

General protective and hygienic measures: Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not eat, drink, smoke or sniff while working.
Do not carry product impregnated cleaning cloths in trouser pockets.

Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store only in the original receptacle.

Information about storage in one common storage facility: Store away from oxidising agents.
Do not store together with alkalis (caustic solutions).
Do not store together with oxidising and acidic materials.

Further information about storage conditions: Store receptacle in a well ventilated area.
Protect from heat and direct sunlight.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

Recommended storage temperature: Store between 5°C and 35°C

Storage class: VCI storage class (VCI = German Association of the Chemical Industry): 10

7.3 Specific end use(s) No further relevant information available.

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Trade name: Paint Stripper

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
64-18-6 formic acid	
IOELV	Long-term value: 9 mg/m³, 5 ppm

DNELs

Ameisensäure
INDEX-Nr. 607-001-00-0 / EG-Nr. 200-579-1 / CAS-Nr. 64-18-6
DNEL akut inhalativ (lokal), Arbeitnehmer: 19 mg/m³
DNEL akut inhalativ (systemisch), Arbeitnehmer: 19 mg/m³
DNEL Langzeit inhalativ (lokal), Arbeitnehmer: 9,5 mg/m³
DNEL Langzeit inhalativ (systemisch), Arbeitnehmer: 9,5 mg/m³
DNEL akut inhalativ (lokal), Verbraucher: 9,5 mg/m³
DNEL akut inhalativ (systemisch), Verbraucher: 9,5 mg/m³
DNEL Langzeit inhalativ (lokal), Verbraucher: 3 mg/m³
DNEL Langzeit inhalativ (systemisch), Verbraucher: 3 mg/m³

N-n-Butylpyrrolidon
EG-Nr. 222-437-8 / CAS-Nr. 3470-98-2
DNEL Langzeit dermal (systemisch), Arbeitnehmer: 10 mg/kg
DNEL Langzeit inhalativ (systemisch), Arbeitnehmer: 24,1 mg/m³
DNEL Langzeit oral (wiederholt), Verbraucher: 2,5 mg/kg
DNEL Langzeit dermal (systemisch), Verbraucher: 5 mg/kg
DNEL Langzeit inhalativ (systemisch), Verbraucher: 17,5 mg/m³

PNECs

Ameisensäure
INDEX-Nr. 607-001-00-0 / EG-Nr. 200-579-1 / CAS-Nr. 64-18-6
PNEC Gewässer, Süßwasser: 2 mg/l
PNEC Gewässer, Meerwasser: 0,2 mg/l
PNEC Gewässer, periodische Freisetzung: 1 mg/l
PNEC Sediment, Süßwasser: 13,4 mg/kg
PNEC Sediment, Meerwasser: 1,34 mg/kg
PNEC, Boden: 1,5 mg/kg
PNEC Kläranlage (STP): 7,2 mg/l

N-n-Butylpyrrolidon
EG-Nr. 222-437-8 / CAS-Nr. 3470-98-2
PNEC Gewässer, Süßwasser: 4 mg/l
PNEC Gewässer, Meerwasser: 0,4 mg/l
PNEC Gewässer, periodische Freisetzung: 1 mg/l
PNEC Sediment, Süßwasser: 29,6 mg/kg
PNEC Sediment, Meerwasser: 2,96 mg/kg
PNEC, Boden: 3,57 mg/kg
PNEC Kläranlage (STP): 30,62 mg/l

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Trade name: Paint Stripper

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Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Appropriate engineering controls Ensure good ventilation/exhaustion at the workplace.
Individual protection measures, such as personal protective equipment
General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.
Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing
Do not inhale gases / fumes / aerosols.
The usual precautionary measures are to be adhered to when handling chemicals.
Store protective clothing separately.
Do not eat, drink, smoke or sniff while working.
See Section 7 for information on safe handling.

Respiratory protection: Not necessary if room is well-ventilated.
Use a properly fitted, air-purifying or air-fed repirator complying with an approved standard if a risk assessment indicates this is necessary.
Fresh air masks or combination filters A2-P2 (EN529) are recommended for short-term work.

Hand protection Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable: Butyl rubber, BR

Eye/face protection If risk of splashing:
Tightly sealed goggles

Body protection: Protective work clothing

Skin protection After contact, clean skin surfaces thoroughly with soap and water or use a suitable cleaning agent

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Trade name: Paint Stripper

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Information	
Physical state	Pasty
Colour:	Beige
Odour:	Specific type
Odour threshold:	Not determined.
Melting point/freezing point:	-75 °C
Boiling point or initial boiling point and boiling range	100 °C (Literatur)
Flammability	Combustible liquid.
Lower and upper explosion limit	
Lower:	0.95 Vol % (berechnet)
Upper:	47.6 Vol % (berechnet)
Flash point:	100 °C (Methode: Pensky-Martens)
Auto-ignition temperature:	>290 °C (Literatur)
Decomposition temperature:	Not determined.
pH at 20 °C	3-4 /1.0 Gew-% (Methode: pH-Elektrode)
Viscosity:	
Kinematic viscosity at 20 °C	9200 mm²/s
Dynamic at 20 °C:	10000 mPas
Solubility	
water:	Partly soluble.
Partition coefficient n-octanol/water (log value)	see section 12
Vapour pressure at 20 °C:	42 hPa (Literatur)
Density and/or relative density	
Density at 20 °C:	1.09 g/cm³ (DIN 51757)
Relative density	Not determined.
9.2 Other information	
Appearance:	
Form:	Pasty
Important information on protection of health and environment, and on safety.	
Ignition temperature:	> 290 °C (Literatur)
Explosive properties:	Product does not present an explosion hazard.
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void

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Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

*

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.
10.2 Chemical stability
Information on the shelf life 2 years and longer if kept original sealed.
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions Reactions with acids and strong oxidizing agents.
10.4 Conditions to avoid See Section 7 for information on safe handling.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: No hazardous decomposition products when stored and handled correctly.
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Harmful if swallowed.

LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Oral	LD50	>1,021–<19,231 mg/kg (rat)

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Trade name: Paint Stripper

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3470-98-2 1-butylpyrrolidin-2-one		
Oral	LD50	>300–<2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50 / 4h	>5.1 mg/l (rat)
64-18-6 formic acid		
Oral	LD50	1,100 mg/kg (rat)

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.
Subacute to chronic toxicity: Based on available data, the classification criteria are not met.
Experience with humans: Prolonged and repeated contact with the product leads to fat loss of the skin and can cause non-allergic contact skin damage (contact dermatitis) and / or pollutant absorption.
Splashes can cause eye irritation and reversible damage.
This product contains neither chlorinated nor aromatic hydrocarbons.
Nevertheless, the usual precautionary measures are to be taken when handling organic solvents.
Attention! Excessive influence, e.g. poor indoor ventilation can cause blurred vision. This is reversible when fresh air is supplied.

11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
3470-98-2 1-butylpyrrolidin-2-one	
EC50 / 48h	100 mg/l (Daphnia magna)
EC50/ 72h	130 mg/l (algae)
LC50 / 96h	>100 mg/l (fish)

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Trade name: Paint Stripper

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12.2 Persistence and degradability Ameisensäure
Abbaubarkeit: 100 % (9 d)
Leicht biologisch abbaubar (nach OECD-Kriterien)

12.3 Bioaccumulative potential Ameisensäure
Verteilungskoeffizient n-Octanol/Wasser: -1,9
N-n-Butylpyrrolidon
Verteilungskoeffizient n-Octanol/Wasser: 1,265

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: The substances in the mixture do not meet the PBT / vPvB criteria according to REACH, Annex XIII.

vPvB: Not applicable.

12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Behaviour in sewage processing plants:	
3470-98-2 1-butylpyrrolidin-2-one	
EC10	100 mg/l (Daphnia magna) 82 mg/l (fish)

Additional ecological information:

General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.

European waste catalogue	
20 01 29*	detergents containing hazardous substances
15 01 10*	packaging containing residues of or contaminated by hazardous substances

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

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Trade name: Paint Stripper

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SECTION 14: Transport information

14.1 UN number or ID number	
ADR, IMDG, IATA	Not applicable
14.2 UN proper shipping name	
ADR, IMDG, IATA	Not applicable
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Not applicable
14.4 Packing group	
ADR, IMDG, IATA	Not applicable
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
UN "Model Regulation":	Not applicable

*

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Directive 2004/42/EC Not applicable

Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients is listed.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Classification according to Regulation (EC) No 1272/2008 The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

Department issuing SDS: product safety department
Contact: Hr. Dr. Starp
Version number of previous version: 2.2
Abbreviations and acronyms: ADR: Accord relatif au transport international des marchandises dangereuses par route
(European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Sources ECHA Portal
Safety data sheets from raw material suppliers
ESIS : European chemical Substances Information System

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Safety data sheet

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Trade name: Paint Stripper

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**** Data compared to the previous version altered.***

Additions, Deletions, Revisions
Updated according to regulation (EU) 2020/878 amending regulation (EC) No: 1907/2006 (REACH)

EU

PB Penetrating Catalyst

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Date of issue: 11/09/2016 Revision date: 06/26/2017 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product name : PB Penetrating Catalyst

Product code : 16-PB, 8-PB, 8-PBS, PB-TS, 20-PB, 26-PB

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Penetrant

1.3. Details of the supplier of the safety data sheet

Manufacturer
The Blaster Corporation
8500 Sweet Valley Drive
Valley View, Ohio 44125 - USA
T (216) 901-5800 - F (216) 901-5801
www.blastercorp.com

1.4. Emergency telephone number

Emergency number : ChemTel 800-255-3924

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Aerosol 2

Dissolved gas

Asp. Tox. 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS02 GHS04 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways.

Precautionary statements (GHS-US) : Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Store locked up. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Dispose of contents/container in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

NEXREG

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3.2. Mixtures

Name	Product identifier	%
Petroleum distillates, hydrotreated light	(CAS No) 64742-47-8	50 - 60
Solvent naphtha, petroleum, heavy aromatic	(CAS No) 64742-94-5	20 - 30
Distillates, petroleum, hydrotreated heavy naphthenic	(CAS No) 64742-52-5	20 - 30
Carbon dioxide	(CAS No) 124-38-9	1 - 4

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Direct contact with the eyes is likely to be irritating.

First-aid measures after ingestion : IF SWALLOWED: immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide, dry chemical, halons or foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable aerosol. Products of combustion may include, and are not limited to: oxides of carbon and oxides of nitrogen.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Reactivity : No dangerous reaction known under conditions of normal use.

5.3. Advice for firefighters

Firefighting instructions : DO NOT fight fire when fire reaches explosives. Evacuate area. Exercise caution when fighting any chemical fire.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Use water spray to keep fire-exposed containers cool.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Isolate from fire, if possible, without unnecessary risk. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Eliminate sources of ignition. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.4. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not spray on an open flame or other ignition source. Keep away from sources of ignition - No smoking. Use non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharge. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas, fumes, vapour or spray. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Do not pierce or burn, even after use.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep locked up and out of reach of children. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store away from direct sunlight or other heat sources. Keep in fireproof place.

Storage area : Store in a well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Petroleum distillates, hydrotreated light (64742-47-8)

Not applicable

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)

Not applicable

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)

Not applicable

Carbon dioxide (124-38-9)

ACGIH	ACGIH TWA (ppm)	5000 ppm
ACGIH	ACGIH STEL (ppm)	30000 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	9000 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Safety glasses or goggles are recommended when using product.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear. Aerosol.
Colour	:	Orange
Odour	:	Characteristic
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	356 ºF (180 °C)
Flash point	:	> 141 ºF (> 61 °C)
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Flammable aerosol.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	0.9
Solubility	:	No data available
Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

Heat of Combustion	:	45.8 kJ/g
Flame Projection	:	0 inches
Flashback	:	None

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Flammable aerosol. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Sources of ignition. Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon and oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified.

PB Penetreating Catalyst	
LD50 oral rat	> 2000 mg/kg (Calculated Acute Toxicity Estimate)
LD50 dermal rabbit	> 2000 mg/kg (Calculated Acute Toxicity Estimate)
LC50 inhalation rat	> 5 mg/l/4h (Calculated Acute Toxicity Estimate)

Petroleum distillates, hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 5.2 mg/l/4h

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2 ml/kg
LC50 inhalation rat	> 590 mg/m³ (Exposure time: 4 h)

Skin corrosion/irritation : Not classified.

Serious eye damage/irritation : Not classified.

Respiratory or skin sensitisation : Not classified.

Germ cell mutagenicity : Not classified.

Carcinogenicity : Not classified.

Reproductive toxicity : Not classified.

Specific target organ toxicity (single exposure) : Not classified.

Specific target organ toxicity (repeated exposure) : Not classified.

Aspiration hazard : May be fatal if swallowed and enters airways.

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Petroleum distillates, hydrotreated light (64742-47-8)	
LC50 fish 1	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
LC50 fish 1	19 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0.95 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	2.34 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)	
LC50 fish 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

PB Penetreating Catalyst	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

PB Penetreating Catalyst	
Bioaccumulative potential	Not established.

Petroleum distillates, hydrotreated light (64742-47-8)	
BCF fish 1	61 - 159

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
BCF fish 1	61 - 159
Partition coefficient n-octanol/water	2.9 - 6.1

Carbon dioxide (124-38-9)	
BCF fish 1	(no bioaccumulation)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1950 Aerosols (flammable, (each not exceeding 1 L capacity)), 2.1

UN-No.(DOT) : UN1950

Proper Shipping Name (DOT) : Aerosols
flammable, (each not exceeding 1 L capacity)

Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas



Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

Naphthalene (91-20-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
Yes	No	No	No	5.8 µg/day

Carbon dioxide (124-38-9)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Date of issue : 11/09/2016

Revision date : 06/26/2017

Other information : None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

PB Penetrating Catalyst

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.
Issue date: 9/11/2016 Revision date: 6/9/2022 Version: 2.0

SECTION 1: Identification

1.1. Identification

Product form	:	Mixture
Product name	:	PB Penetrating Catalyst
Product code	:	16-PB, 8-PB, PB-TS, 20-PB, 26-PB, 16-PB-DS

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Penetrant

1.3. Supplier

Manufacturer
Blaster LLC
8500 Sweet Valley Drive
44125 Valley View, Ohio - USA
T (216) 901-5800 - F (216) 901-5801
www.blasterproducts.com

1.4. Emergency telephone number

Emergency number	:	Chemtrec (800) 424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flam. Aerosol 2	Flammable aerosol
Press. Gas (Diss.)	Contains gas under pressure; may explode if heated
Eye Irrit. 2	Causes serious eye irritation
Repr. 1B	May damage fertility or the unborn child
Asp. Tox. 1	May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) :
Flammable aerosol
Contains gas under pressure; may explode if heated
May be fatal if swallowed and enters airways
Causes serious eye irritation
May damage fertility or the unborn child

Precautionary statements (GHS US) :
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Wash hands, forearms and face thoroughly after handling.

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Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center or doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
Do NOT induce vomiting.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Store in a well-ventilated place.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.
Petroleum distillates, hydrotreated light	CAS-No.: 64742-47-8	30 – 60	Flam. Liq. 3;H226 Asp. Tox. 1;H304
Solvent naphtha, petroleum, heavy aromatic	CAS-No.: 64742-94-5	10 – 30	Flam. Liq. 3;H226 Asp. Tox. 1;H304
Distillates, petroleum, hydrotreated heavy naphthenic	CAS-No.: 64742-52-5	10 – 30	Asp. Tox. 1;H304
Carbon dioxide	CAS-No.: 124-38-9	0.5 - 1.5	Press. Gas (Comp.);H280
Poly(oxy-1,2-ethanediyl), .alpha.-(dinonylphenyl)-.omega.-hydroxy-, phosphate	CAS-No.: 39464-64-7	0.1 - 1	Skin Corr. 1A;H314 Eye Dam. 1;H318
Methyl salicylate	CAS-No.: 119-36-8	0.1 - 1	Acute Tox. 4 (Oral);H302 Eye Dam. 1;H318 Repr. 1B;H360

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause respiratory tract irritation.

Symptoms/effects after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : Causes serious eye irritation.Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Carbon dioxide, dry chemical, halons. Foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable aerosol. Products of combustion may include, and are not limited to: oxides of carbon.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : DO NOT fight fire when fire reaches explosives. Evacuate area. Exercise caution when fighting any chemical fire.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Use water spray to keep fire-exposed containers cool.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Isolate from fire, if possible, without unnecessary risk. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	:	Eliminate sources of ignition. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up	:	Scoop up material and place in a disposal container. Provide ventilation.

6.4. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Do not spray on an open flame or other ignition source. Keep away from sources of ignition - No smoking. Use non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharge. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas, fumes, vapour or spray. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Do not pierce or burn, even after use.
Hygiene measures	:	Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	:	Keep locked up and out of reach of children. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store away from direct sunlight or other heat sources. Keep in fireproof place.
Storage area	:	Store in a well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

PB Penetrating Catalyst

No additional information available

Petroleum distillates, hydrotreated light (64742-47-8)

No additional information available

Carbon dioxide (124-38-9)

USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	5000 ppm
ACGIH OEL STEL [ppm]	30000 ppm
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) [1]	9000 mg/m³
OSHA PEL (TWA) [2]	5000 ppm

Carbon dioxide (124-38-9)	
USA - IDLH - Occupational Exposure Limits	
IDLH [ppm]	40000 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	9000 mg/m³
NIOSH REL TWA [ppm]	5000 ppm
NIOSH REL (STEL)	54000 mg/m³
NIOSH REL STEL [ppm]	30000 ppm

Poly(oxy-1,2-ethanediyl), .alpha.-(dinonylphenyl)-.omega.-hydroxy-, phosphate (39464-64-7)
No additional information available

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)
No additional information available

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)
No additional information available

Methyl salicylate (119-36-8)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear chemically resistant protective gloves.

Eye protection:

Safety glasses or goggles are recommended when using product.

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear. Aerosol.

Color	:	orange
Odor	:	Characteristic
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	180 °C (356 °F)
Flash point	:	> 141 ºF (> 61 °C)
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Flammable aerosol.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	0.9
Solubility	:	No data available
Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

Heat of Combustion	:	45.8 kJ/g
Flashback	:	None
Flame Projection	:	0 inches

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Flammable aerosol. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Sources of ignition. Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Petroleum distillates, hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 5.2 mg/l/4h

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other:EPA Fed Reg Vol 50, No. 188 1985 and as amended in Fed Reg Vol 52, No. 97, 1987
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 590 mg/m³ (Exposure time: 4 h)

Methyl salicylate (119-36-8)	
LD50 oral rat	887 mg/kg
LD50 oral	1060 mg/kg body weight Animal: guinea pig, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 873 - 1300
LD50 dermal rabbit	> 5000 mg/kg
ATE US (oral)	887 mg/kg body weight

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met.)
Reproductive toxicity : May damage fertility or the unborn child.

Petroleum distillates, hydrotreated light (64742-47-8)	
NOAEL (animal/male, F0/P)	≥ 3000 mg/kg body weight Animal: rat, Animal sex: male

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
NOAEL (animal/male, F0/P)	35 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:OPPTS 870.3650 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test
NOAEL (animal/female, F0/P)	125 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:OPPTS 870.3650 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Petroleum distillates, hydrotreated light (64742-47-8)	
NOAEL (oral,rat,90 days)	750 mg/kg body weight Animal: rat, Animal sex: female
NOAEC (inhalation,rat,vapor,90 days)	≥ 0.024 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)	
LOAEL (oral,rat,90 days)	125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	≈ 1000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
LOAEL (oral,rat,90 days)	1250 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
LOAEC (inhalation,rat,vapor,90 days)	4.71 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
NOAEL (oral,rat,90 days)	625 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	2000 mg/kg body weight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEC (inhalation,rat,vapor,90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)

Aspiration hazard : May be fatal if swallowed and enters airways.

Viscosity, kinematic : No data available

Carbon dioxide (124-38-9)	
Vaporizer	Aerosol

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)	
Viscosity, kinematic	1.99 – 847 mm²/s Temp.: '40°C' Parameter: 'mm²/smm2/s '

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
Viscosity, kinematic	2.66 mm²/s

Methyl salicylate (119-36-8)	
Viscosity, kinematic	1.308 mm²/s

Symptoms/effects after inhalation : May cause respiratory tract irritation.

Symptoms/effects after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Petroleum distillates, hydrotreated light (64742-47-8)	
LC50 - Fish [1]	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)	
LC50 - Fish [1]	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 - Crustacea [1]	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
LC50 - Fish [1]	19 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	0.95 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	2.34 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 - Crustacea [2]	0.76 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	12.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	18.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	11.7 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	18.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Methyl salicylate (119-36-8)	
LC50 - Fish [1]	19.8 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	28 mg/l Test organisms (species): Daphnia magna
LC50 - Fish [2]	1370 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	1.6 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	1.1 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

12.2. Persistence and degradability

PB Penetrating Catalyst	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

PB Penetrating Catalyst	
Bioaccumulative potential	Not established.

Petroleum distillates, hydrotreated light (64742-47-8)	
BCF - Fish [1]	61 – 159

Carbon dioxide (124-38-9)	
BCF - Fish [1]	(no bioaccumulation)

Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	
BCF - Fish [1]	61 – 159
Partition coefficient n-octanol/water	2.9 – 6.1

Methyl salicylate (119-36-8)	
Partition coefficient n-octanol/water	2.55

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Flammable vapors may accumulate in the container.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

DOT NA No : UN1950

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Aerosols (flammable, (each not exceeding 1 L capacity))

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 2.1

Hazard labels (DOT) : 2.1



14.4. Packing group

Packing group (DOT) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

DOT

UN-No.(DOT)	:	UN1950
DOT Special Provisions (49 CFR 172.102)	:	N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	306
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	None
DOT Packaging Bulk (49 CFR 173.xxx)	:	None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	150 kg
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	25 - Protected from sources of heat,87 - Stow ‘‘separated from’’ Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.2. International regulations

No additional information available

15.3. US State regulations

WARNING: This product can expose you to Naphthalene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Issue date	:	09/11/2016
Revision date	:	06/09/2022
Other information	:	None.

Full text of H-phrases	
Asp. Tox. 1	Aspiration hazard Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Aerosol 2	Flammable aerosol Category 2
Press. Gas (Diss.)	Gases under pressure Dissolved gas

Full text of H-phrases	
Repr. 1B	Reproductive toxicity Category 1B

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

PEAK -20 ºF Windshield Wash & De-icer

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 01/03/2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : PEAK -20 ºF Windshield Wash & De-icer

SDS ID : 115052

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Windshield washer fluid

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
3100 Sanders Road
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : 800 424 9300 (United States); 00 1 703 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids, Category 3	H226	Flammable liquid and vapor
Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Acute toxicity (dermal), Category 3	H311	Toxic in contact with skin.
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled.
Specific target organ toxicity — single exposure, Category 1	H370	Causes damage to organs (May cause blindness if swallowed)

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS02 GHS06 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Flammable liquid and vapor
Harmful if swallowed or if inhaled
Toxic in contact with skin.
Causes damage to organs (May cause blindness if swallowed)

Precautionary statements (GHS-US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks
Keep container tightly closed.
Ground/Bond container and receiving equipment
Use explosion-proof electrical, lighting, ventilating equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe mist, spray, vapors
Wash affected areas thoroughly after handling.

Precautionary statements (GHS-US) *continued*	:	Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear personal protective equipment as required. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower If inhaled: Remove person to fresh air and keep comfortable for breathing If exposed: Call a poison center/doctor If swallowed: Immediately call doctor/physician or poison center. Rinse Mouth Call doctor/physician or poison center if you feel unwell Wash contaminated clothing before reuse. In case of fire: Use ABC powder. Foam. Dry powder. Carbon dioxide. Sand to extinguish. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% by wt	GHS-US classification
water	(CAS-No.) 7732-18-5	>= 67	Not classified
methanol	(CAS-No.) 67-56-1	<= 33	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	:	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical advice. Allow the victim to rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
First-aid measures after skin contact	:	Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	:	Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	:	Never give anything by mouth to an unconscious person. Rinse mouth. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	:	High concentrations may cause central nervous system characterized by severe headaches, dizziness, nausea and confusion. May cause irritation of the nose and throat.
Symptoms/effects after skin contact	:	Prolonged exposure to skin may cause skin irritation experienced as burning, dryness, cracking and redness.
Symptoms/effects after eye contact	:	Direct contact with eyes is likely to be irritating.
Symptoms/effects after ingestion	:	May cause nausea, abdominal pain, headache, shortness of breath, visual impairment and blindness. Severe poisoning can lead to coma and death.
Chronic symptoms	:	ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin, Dry skin, Skin rash/inflammation, Headache, Feeling of weakness, Disturbed tactile sensibility, Visual disturbances, Sleeplessness, Gastrointestinal complaints, Cardiac and blood circulation effects.

4.3. Indication of any immediate medical attention and special treatment needed

Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. This product contains/consists of methanol which can cause intoxication and depression of the central nervous system.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : ABC powder. Foam. Dry powder. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream. May spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor. Vapors are heavier than air and may travel along the ground or may be moved by ventilation.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not breathe mist, spray, vapors. In case of inadequate ventilation wear respiratory protection. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Keep upwind. Mark the danger area.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, pump into suitable containers. Dam up the liquid spill. Plug the leak, cut off the supply. Try to reduce evaporation. Take account of toxic/corrosive precipitation water. Dilute combustible/toxic gases/vapors with water spray.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : In use, may form flammable vapor-air mixture.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Use explosion-proof ventilating, lighting, electrical equipment. Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, hot surfaces, open flames, sparks. Keep container closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies. Do not cut, drill, weld, use a blowtorch on, etc. containers even when empty.

Incompatible products : Keep away from strong acids, strong bases and oxidizing agents.

Incompatible materials : Sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

methanol (67-56-1)		
ACGIH	Local name	Methanol
ACGIH	ACGIH TWA (ppm)	200 ppm (Skin)
ACGIH	ACGIH STEL (ppm)	250 ppm (Skin)
ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³ (Skin)
OSHA	OSHA PEL (TWA) (ppm)	200 ppm (Skin)

water (7732-18-5)
Not applicable

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Safety glasses.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear
respiratory protection. Wear appropriate mask



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Blue
Odor	:	alcohol
Odor threshold	:	No data available
Relative evaporation rate (butylacetate=1)	:	Greater than n-butyl acetate
Freezing point	:	-28.9 °C (-20 ºF)
Boiling point	:	81.7 °C (179 ºF)
Flash point	:	33.3 °C (92 ºF)
Auto-ignition temperature	:	No data available

Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	43 mm Hg @ 20 ºC
Relative vapor density at 20 °C	:	Heavier than air
Specific Gravity	:	0.96 @ 20 ºC
Solubility	:	Water: Complete
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	6 - 36 vol %
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

VOC content : < 33 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Keep away from strong acids, strong bases and oxidizing agents.

10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed (oral); Toxic in contact with skin (dermal); Harmful if inhaled (inhalation)

PEAK -20 ºF Windshield Wash & De-icer	
ATE US (oral)	303.03 mg/kg bodyweight
ATE US (dermal)	909.091 mg/kg bodyweight
ATE US (dust, mist)	1.515 mg/l/4h

methanol (67-56-1)	
LD50 oral rat	1187 - 2769 mg/kg bodyweight (BASF test, Rat, Male / female, Weight of evidence, Aqueous solution, Oral, 7 day(s))
LD50 dermal rabbit	17100 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)
LC50 inhalation rat (mg/l)	128.2 mg/l/4h (BASF test, 4 h, Rat, Male/female, Weight of evidence)
ATE US (oral)	100 mg/kg bodyweight
ATE US (dermal)	300 mg/kg bodyweight
ATE US (gases)	700 ppmv/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust,mist)	0.5 mg/l/4h

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified

Reproductive toxicity	:	Not classified
STOT-single exposure	:	Causes damage to organs (May cause blindness if swallowed) .
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Symptoms/effects after inhalation	:	High concentrations may cause central nervous system characterized by severe headaches, dizziness, nausea and confusion. May cause irritation of the nose and throat.
Symptoms/effects after skin contact	:	Prolonged exposure to skin may cause skin irritation experienced as burning, dryness, cracking and redness.
Symptoms/effects after eye contact	:	May cause severe irritation.
Symptoms/effects after ingestion	:	May cause nausea, abdominal pain, headache, shortness of breath, visual impairment and blindness. Severe poisoning can lead to coma and death.
Chronic symptoms	:	ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin, Dry skin, Skin rash/inflammation, Headache, Feeling of weakness, Disturbed tactile sensibility, Visual disturbances, Sleeplessness, Gastrointestinal complaints, Cardiac and blood circulation effects.

SECTION 12: Ecological information

12.1. Toxicity

methanol (67-56-1)	
LC50 fish 1	15,400.00 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	18,260.00 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
ErC50 (algae)	22,000.00 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability

methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O_2/g substance
Chemical oxygen demand (COD)	1.42 g O_2/g substance
ThOD	1.50 g O_2/g substance

12.3. Bioaccumulative potential

methanol (67-56-1)	
BCF fish 1	1 - 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Log Pow	-0.77 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

methanol (67-56-1)	
Surface tension	0.02 N/m (20 °C)
Log Koc	0.09 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Effect on the ozone layer : No known effect on the ozone layer

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Non-Bulk:
In inner packaging no more than 5.0 L (1.3 Gallons): Proper Shipping Name: Limited Quantity of Class III Per 49 CFR Part 173.150 (PG III, inner packaging no more than 5.0L)

Bulk (in quanitites larger than 5.0L [1.3 gallons] in a single container)

Transport document description : UN1993 Flammable liquids, n.o.s., (methanol solution) 3, III

UN-No.(DOT) : UN1993

Proper Shipping Name (DOT) : Flammable liquids, n.o.s.

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

Emergency Response Guide (ERG) Number : 128

Other information : No supplementary information available.

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

Transport by sea

In accordance with IMDG / IMO

Transport document description (IMDG) : UN 1992 Flammable Liquid, Toxic, n.o.s. (methanol solution) , 3, 6.1, III

UN-No. (IMDG) : 1992

Proper Shipping Name (IMDG) : Flammable Liquid, Toxic, n.o.s. (methanol)

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : III - substances presenting low danger

Subsidiary class (IMDG) : 6.1 – Toxic substances

Air transport

In accordance with IATA / ICAO

Transport document description (IATA)	:	UN 1992 Flammable Liquid, Toxic, n.o.s. (methanol solution), 3 (6.1), III
UN-No. (IATA)	:	1992
Proper Shipping Name (IATA)	:	Flammable Liquid, Toxic, n.o.s. (methanol)
Class (IATA)	:	3 - Flammable Liquids
Packing group (IATA)	:	III - Minor Danger
Subsidiary risks (IATA)	:	6.1 - Toxic substances

SECTION 15: Regulatory information

15.1. US Federal regulations

PEAK -20 ºF Windshield Wash & De-icer	
EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
SARA Section 302 Threshold Planning Quantity (TPQ)	None
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	33 % (Methanol CAS # 67-56-1)

methanol (67-56-1)	
CERCLA RQ	5000 lb(s) (2270 kg)

water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

PEAK -20 ºF Windshield Wash & De-icer	
WHMIS Classification	This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS.

15.3. US State regulations

⚠ **WARNING:** This product can expose you to methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

methanol (67-56-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		47000 µg/day (inhalation); 23,000 µg/day (oral)

methanol (67-56-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 01/03/2022

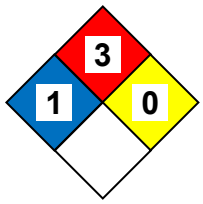
Full text of H-statements:

H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H370	Causes damage to organs

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS GHS US (GHS HazCom 2012) OWI

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PENRAY AIR BRAKE ANTIFREEZE

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 03/20/2014 Revision date: 03/20/2014 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Substance name : PENRAY AIR BRAKE ANTIFREEZE

Product code : 5601

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Air Brake Antifreeze

1.3. Details of the supplier of the safety data sheet

The Penray Companies, Inc.
440 Denniston Ct.
60090 Wheeling, IL
T (800) 373-6729
rotto@penray.com

1.4. Emergency telephone number

Emergency number : (800) 373-6729
CHEMTREC (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable Liquid 2
Acute toxicity 3 (Oral)
Acute toxicity 3 (Dermal)
Acute toxicity 3 (Inhalation)
Eye irritation 2B
Specific target organ toxicity - Single exposure 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS02 GHS06 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Highly flammable liquid and vapor. Toxic if swallowed, in contact with skin or if inhaled. Causes eye irritation. Causes damage to eyes.

Precautionary statements (GHS-US) : Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. If exposed: Call a poison center/doctor. If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a poison center/doctor if you feel unwell If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	GHS-US classification
Methanol	(CAS No) 67-56-1	100	Flam. Liq. 2 Acute Tox. 3 (Oral, Dermal, Inhalation) Eye Irrit. 2B STOT SE 1

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical advice/attention.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.

Symptoms/injuries after skin contact : Toxic in contact with skin. May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.

Symptoms/injuries after eye contact : Causes eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion : Toxic if swallowed. May be fatal or cause blindness if swallowed. May cause stomach distress, nausea or vomiting. Ingestion may cause headache, dizziness, drowsiness, metabolic acidosis, coma, seizures.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon, formaldehyde.

5.3. Advice for firefighters

Firefighting instructions : Cool closed containers exposed to fire with water. Burns with a colorless invisible flame. In case of fire and/or explosion do not breathe fumes.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2. Methods and material for containment and cleaning up

For containment : Dike and contain spill. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Do not get in eyes, on skin, or on clothing. Do not breathe gas, fumes, vapor or spray. Do not swallow. Handle and open container with care. Use only non-sparking tools. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Keep cool. Store in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methyl alcohol (67-56-1)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Neoprene or nitrile rubber gloves.

Eye protection : Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : A NIOSH approved respirator is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear.

Color : Colorless.

Odor : Characteristic.

Odor threshold : 100 ppm

pH : No data available.

Relative evaporation rate (butylacetate=1) : > 1

Melting point : No data available.

Freezing point : ~ -97.8 °C (~ -144.0 °F)

Boiling point : 64 - 65 °C (147 - 149 °F) @ 101.32 kPa

Flash point : 11 - 12 °C (52 - 54 °F)

Critical temperature : ~ 240 °C (~ 464.0 °F)

Self ignition temperature : 385 - 464 °C (725 - 867 °F)

Decomposition temperature : No data available.

Flammability (solid, gas) : Flammable

Vapor pressure : 12.3 - 12.8 kPa @ 20 °C (68 °F)

Relative vapor density at 20 °C : ~ 1.11

Relative density : ~ 0.79

Solubility : Soluble.

Log Pow : No data available.

Log Kow	:	No data available.
Viscosity, kinematic	:	No data available.
Viscosity, dynamic	:	No data available.
Explosive properties	:	No data available.
Oxidising properties	:	No data available.
Explosive limits	:	6 - 36 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Bases. Metals.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, formaldehyde.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed, in contact with skin or if inhaled.

5601	
LD50 oral rat	>50 but ≤300 mg/kg (Calculated using ATE values)
LD50 dermal rabbit	>200 but ≤1000 mg/kg (Calculated using ATE values)
LC50 inhalation rat (mg/l)	>2.0 but ≤10.0 mg/l/4h (Calculated using ATE values)

Methyl alcohol (67-56-1)	
LD50 oral rat	5628 mg/kg
LD50 dermal rabbit	15800 mg/kg
LC50 inhalation rat (mg/l)	83.2 mg/l/4h

Skin corrosion/irritation	:	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	:	Causes eye irritation.
Respiratory or skin sensitisation	:	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	:	Based on available data, the classification criteria are not met.
Carcinogenicity	:	Based on available data, the classification criteria are not met.
Reproductive toxicity	:	Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	:	Causes damage to eyes. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances in vision, including blindness.
Specific target organ toxicity (repeated exposure)	:	Based on available data, the classification criteria are not met.
Aspiration hazard	:	Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	:	Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.
Symptoms/injuries after skin contact	:	Toxic in contact with skin. May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.
Symptoms/injuries after eye contact	:	Causes eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion	:	Toxic if swallowed. May be fatal or cause blindness if swallowed. May cause stomach distress, nausea or vomiting. Ingestion may cause headache, dizziness, drowsiness, metabolic acidosis, coma, seizures.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

5601	
Persistence and degradability	Product is biodegradable.

12.3. Bioaccumulative potential

5601	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Handle empty containers with care because residual vapors are flammable.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

UN-No. : 1230

14.2. UN proper shipping name

Proper Shipping Name : Methanol

Department of Transportation Hazard Classes : 3 (6.1)

Hazard labels :



Packing group : II

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

Methyl alcohol (67-56-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %

15.2. US State regulations

5601()	
State or local regulations	This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

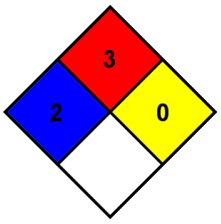
SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

IARC	International Agency for Research on Cancer.
	1 - Carcinogenic to humans; 2A - Probably carcinogenic to humans; 2B - Possibly carcinogenic to humans; 3 - Not classifiable; 4 - Probably not carcinogenic to humans.
NTP	**National Toxicology Program.**
	1 - Evidence of Carcinogenicity; 2 - Known Human Carcinogens; 3 - Reasonably anticipated to be Human Carcinogen; 4 - Substances delisted from report on Carcinogens; 5 - Twelfth Report - Items under consideration.

SECTION 16: Other information

Indication of changes	:	None.
Date of issue	:	03/20/2014
Other information	:	None.

NFPA health hazard	:	2
NFPA fire hazard	:	3
NFPA reactivity	:	0



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

PENRAY BATTERY CLEANER

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 06/25/2014 Revision date: 06/25/2014 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : PENRAY BATTERY CLEANER

Product code : 7012

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Battery cleaner.

1.3. Details of the supplier of the safety data sheet

The Penray Companies, Inc.
440 Denniston Ct.
Wheeling, IL 60090
T (800) 373-6729
rotto@penray.com

1.4. Emergency telephone number

Emergency number : (800) 373-6729
CHEMTREC (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable Aerosol 1
Gases Under Pressure - Liquefied Gas
Eye irritation 2A
Skin sensitization 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS02 GHS04 GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statements (GHS-US) : Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Wash hands thoroughly after handling. Wear protective gloves/eye protection/face protection. Avoid breathing gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Do not expose to temperatures exceeding 50 ºC/122 ºF. Protect from sunlight. Store in a well-ventilated place. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Sodium carbonate	(CAS No) 497-19-8	3 - 7	Eye Irrit. 2A

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Name	Product identifier	%	GHS-US classification
Isobutane	(CAS No) 75-28-5	3 - 7	Flam. Gas 1 Liquefied gas STOT SE 3
2-Butoxyethanol	(CAS No) 111-76-2	1 - 5	Flam. Liq. 3 Acute Tox. 4 (Oral, Dermal, Inhalation) Skin Irrit. 2 Eye Irrit. 2A
Sodium mercaptobenzothiazole	(CAS No) 2492-26-4	0.1 - 1	Met. Corr. 1 Skin Corr. 1C Skin Sens. 1
Ethylene oxide	(CAS No) 75-21-8	< 0.1	Flam. Gas 1 Liquefied gas Acute Tox. 3 (Inhalation) Skin Irrit. 2 Eye Irrit. 2A Muta. 1B Carc. 1B STOT SE 3

* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory irritation..

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause sensitisation by skin contact.

Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol. Products of combustion may include, and are not limited to: oxides of carbon.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid contact with skin and eyes. Avoid breathing gas/mist/vapors/spray. Do not swallow. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep locked up and out of reach of children. Do not expose ot temperatures exceeding 50°C/ 122°F. Store away from direct sunlight or other heat sources. Store in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium carbonate (497-19-8)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

Isobutane (75-28-5)		
USA ACGIH	ACGIH STEL (ppm)	1000 ppm

2-Butoxyethanol (111-76-2)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	240 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm

Sodium mercaptobenzothiazole (2492-26-4)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

Ethylene oxide (75-21-8)		
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	5 ppm

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Safety glasses or goggles are recommended when using product.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Gas/Pressurized Liquid.
Appearance	:	Clear.
Colour	:	Colourless.
Odour	:	Solvent.
Odour threshold	:	No data available.
pH	:	No data available.
Relative evaporation rate (butylacetate=1)	:	No data available.
Melting point	:	No data available.
Freezing point	:	No data available.
Boiling point	:	No data available.
Flash point	:	No data available.
Self ignition temperature	:	No data available.
Decomposition temperature	:	No data available.
Flammability (solid, gas)	:	Flammable.
Vapour pressure	:	No data available.
Relative vapour density at 20 °C	:	No data available.
Relative density	:	1.051 - 1.055
Solubility	:	No data available.
Log Pow	:	No data available.
Log Kow	:	No data available.
Viscosity, kinematic	:	No data available.
Viscosity, dynamic	:	No data available.
Explosive properties	:	No data available.
Oxidising properties	:	No data available.
Explosive limits	:	No data available.

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Extremely flammable aerosol. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

7012	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

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Sodium carbonate (497-19-8)	
LD50 oral rat	4090 mg/kg

Isobutane (75-28-5)	
LC50 inhalation rat (mg/l)	658 mg/l/4h

2-Butoxyethanol (111-76-2)	
LD50 oral rat	470 mg/kg
LD50 dermal rabbit	220 mg/kg
LC50 inhalation rat (ppm)	450 ppm/4h

Sodium mercaptobenzothiazole (2492-26-4)	
LD50 oral rat	2100 mg/kg
LD50 dermal rabbit	> 7940 mg/kg

Ethylene oxide (75-21-8)	
LD50 oral rat	72 mg/kg
LC50 inhalation rat (ppm)	800 ppm/4h

Skin corrosion/irritation : Based on available data, the classification criteria are not met.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenicity : Based on available data, the classification criteria are not met.

2-Butoxyethanol (111-76-2)	
IARC group	3 - Not classifiable
National Toxicity Program (NTP) Status	1 - Evidence of Carcinogenicity

Ethylene oxide (75-21-8)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	1 - Evidence of Carcinogenicity, 2 - Known Human Carcinogens
	In OSHA Specifically Regulated Carcinogen list

Reproductive toxicity : Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.
Aspiration hazard : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : May cause respiratory irritation..
Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause sensitisation by skin contact.
Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology – general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

7012	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

7012	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on ozone layer : No additional information available.

NEXREG
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Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Flammable vapours may accumulate in the container. Do not incinerate closed containers.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

UN-No. UN1950

14.2. UN proper shipping name

Proper Shipping Name : Aerosols, flammable

Hazard Classes 2.1

Hazard labels :



14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Tribasic sodium phosphate dodecahydrate	CAS No 10101-89-0

Ethylene oxide (75-21-8)	
Listed on SARA Section 302 (Specific toxic chemical listings) Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000
SARA Section 313 - Emission Reporting	0.1 %

15.2. US State regulations

7012	
State or local regulations	This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16: Other information

Indication of changes : None.

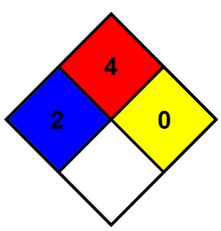
Date of issue : 06/25/2014

Other information : None.

NFPA health hazard : 2

NFPA fire hazard : 4

NFPA reactivity : 0



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SAFETY DATA SHEET

Revision Date 27-Oct-2016 **Version** 5

1. IDENTIFICATION

Product identifier
Product Name 133H ANTI-SEIZE LUBRICANT 4OZ.

Other means of identification
Product Code 80071
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Lubricant
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufactured and Distributed by:
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

May Also Be Distributed by:
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

Company Phone Number 1-87-Permatex
(877) 376-2839
24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4

Label elements

Emergency Overview

Warning

Harmful if swallowed



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Appearance Silver	**Physical state** Paste	**Odor** Petroleum

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
Get medical advice/attention if you feel unwell

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- The classification as a carcinogen 1 need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346. This note applies only to certain complex oil derived substances in Annex I

Unknown acute toxicity 19.23275 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC	64742-52-5	30 - 60	*
ALUMINIUM POWDER	7429-90-5	5 - 10	*
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT	64742-71-8	3 - 7	*

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash skin with soap and water. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
Water.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Acids, Alkalis, Amines

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ALUMINIUM POWDER 7429-90-5	TWA: 1 mg/m³ respirable fraction	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction (vacated) TWA: 5 mg/m³ Al Aluminum	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust TWA: 5 mg/m³ Al

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Paste
Appearance Silver
Odor Petroleum
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	> 93 °C / > 200 °F	Tag Closed Cup
Evaporation rate	< 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	<5 mm Hg	
Vapor density	>1	Air = 1
Relative density	1.17	
Water solubility	Negligible	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	

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Explosive properties No information available
Oxidizing properties No information available

Other Information

Softening point No information available
Molecular weight No information available
VOC Content (%) 0
Density No information available
Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Acids, Alkalis, Amines

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause irritation of respiratory tract.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact May cause skin irritation and/or dermatitis.

Ingestion Harmful if swallowed.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	A2	Group 1	Known	X
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT	A2	Group 1	Known	X

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64742-71-8				

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Not classifiable as a human carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Target Organ Effects Central Vascular System (CVS), Eyes, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1978 mg/kg
ATEmix (inhalation-vapor) 32255 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

32.42995 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number Not applicable

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
ALUMINIUM POWDER 7429-90-5	Ignitable powder

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

IMDG

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Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
ALUMINIUM POWDER - 7429-90-5	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
CALCIUM OXIDE 1305-78-8	X	X	X
GRAPHITE 7782-42-5	X	X	X
ALUMINIUM POWDER 7429-90-5	X	X	X
PARAFFIN OILS (PETROLEUM),	-	X	-

CATALYTIC DEWAXED LIGHT 64742-71-8			
COPPER 7440-50-8	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 1	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 1	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 27-Oct-2016

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

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SAFETY DATA SHEET

Revision Date 15-Sep-2017 **Version** 6

1. IDENTIFICATION

Product identifier
Product Name 133K ANTI-SEIZE LUBRICANT 8OZ

Other means of identification
Product Code 80078

Recommended use of the chemical and restrictions on use
Recommended Use Lubricant.
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

May Also Be Distributed by:
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

24-hour emergency phone number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4

Label elements

Emergency Overview

Signal word
Warning

Harmful if swallowed



Appearance Silver	**Physical state** Paste	**Odor** Petroleum

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
Get medical advice/attention if you feel unwell
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Note L: The classification as a carcinogen 1 does not apply. The substance contains less than 3 % DMSO extract as measured by IP 346. This note applies only to certain complex oil derived substances in Annex I

Unknown acute toxicity 19.23275 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance(s)

Chemical Name	CAS No	Weight-%
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC	64742-52-5	30 - 60
ALUMINIUM POWDER	7429-90-5	5 - 10
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT	64742-71-8	3 - 7

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash skin with soap and water. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
Water.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Acids, Alkalis, Amines

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ALUMINIUM POWDER 7429-90-5	TWA: 1 mg/m³ respirable fraction	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction (vacated) TWA: 5 mg/m³ Al Aluminum	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust TWA: 5 mg/m³ Al

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Paste
Appearance Silver
Odor Petroleum
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	> 93 °C / > 200 °F	Tag Closed Cup
Evaporation rate	< 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	<5 mm Hg	
Vapor density	>1	Air = 1
Relative density	1.17	
Water solubility	Negligible	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

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Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
Stable under normal conditions

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Acids, Alkalis, Amines

Hazardous Decomposition Products
Carbon oxides

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.
Ingestion	Harmful if swallowed.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	A2	Group 1	Known	X
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT 64742-71-8	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)

FRS SDS Reference Library | S097 | Library page 1033

Group 1 - Carcinogenic to Humans
Not classifiable as a human carcinogen
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Target Organ Effects Central Vascular System (CVS), Eyes, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1978 mg/kg
ATEmix (inhalation-vapor) 32255 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

32.42995 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number Not applicable

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
ALUMINIUM POWDER 7429-90-5	Ignitable powder

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

IMDG
Proper shipping name: Not regulated

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15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
ALUMINIUM POWDER - 7429-90-5	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
CALCIUM OXIDE 1305-78-8	X	X	X
GRAPHITE 7782-42-5	X	X	X
ALUMINIUM POWDER 7429-90-5	X	X	X
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT 64742-71-8	-	X	-
COPPER 7440-50-8	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 15-Sep-2017

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Revision Date 05-Apr-2016 **Version** 2

1. IDENTIFICATION

Product identifier
Product Name 84101 5 MINUTE EPOXY (RESIN)

Other means of identification
Product Code VC1233B
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use (Epoxy resin)
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

May Also Be Distributed by:
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

Label elements

Emergency Overview

Warning

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction

FRS SDS Reference Library | S098 | Library page 1037



Appearance Amber **Physical state** Viscous liquid **Odor** Slight

Precautionary Statements - Prevention
Wear eye/face protection
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Contains epoxy constituents with an average molecular weight of <= 700

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
EPOXY RESIN (EPICHLOROHYDRIN, BISPHENOL A)	25085-99-8	100	*

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling.

Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Acids, Bases, Amines

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Viscous liquid
Appearance	Amber
Odor	Slight
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 260 °C / >500 °F	
Flash point	252 °C / 486 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	0.03 mbar @ 77°C (171°F)	
Vapor density	>1	Air = 1
Relative density	1.16	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Partition coefficient	3.242	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	11,000-14,000 mPa.s @25°C	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Acids, Bases, Amines

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis. May cause sensitization by skin contact.
Ingestion	Ingestion may cause irritation to mucous membranes.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Causes serious eye irritation.
Sensitization	Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	Not applicable

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

IMDG
Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not determined
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

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Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations
U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 05-Apr-2016

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End of Safety Data Sheet

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SAFETY DATA SHEET

Revision Date 05-Apr-2016 **Version** 4

1. IDENTIFICATION

Product identifier
Product Name 84101 5 MINUTE EPOXY (HARDENER)

Other means of identification
Product Code VC1521B
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Epoxy curing agent
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

May Also Be Distributed by:
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Label elements

Emergency Overview

Warning

Causes skin irritation
Causes serious eye irritation



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Appearance Yellow	**Physical state** Liquid	**Odor** Mercaptan

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection

Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Not applicable

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
MERCAPTAN AMINE BLEND (TSRN 679485-6533P)	_	60-100	*
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL	90-72-2	10 - 30	*

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash with soap and water. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Acids, Alkalis

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Yellow
Odor	Mercaptan
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range		
Flash point	> 93 °C / > 200 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.13	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	1000-1600 mPas	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0
Density	No information available
Bulk density	No information available

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10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Acids, Alkalis

Hazardous Decomposition Products
Carbon oxides
Nitrogen oxides (NOx)
Oxides of sulfur
Hydrogen sulfide

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause irritation of respiratory tract.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact May cause skin irritation and/or dermatitis.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL 90-72-2	= 1200 mg/kg (Rat)	= 1280 mg/kg (Rat)	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

Oral LD50 10909.1 mg/kg
Dermal LD50 11636.4 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

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Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	Not applicable

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

IMDG
Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not determined
ENCS	Not determined
IECSC	Not determined
KECL	Not determined
PICCS	Not determined
AICS	Not determined

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any

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chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations
U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 05-Apr-2016

Disclaimer
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End of Safety Data Sheet

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 15-Aug-2023 **Version** 8

1. IDENTIFICATION

Product identifier
Product Name 84109 STEEL WELD (RESIN)

Other means of identification
Product Code PTX202005B

Recommended use of the chemical and restrictions on use
Recommended Use Epoxy resin
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex, Inc.
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502
24-hour emergency phone number
Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1

Label elements

Emergency Overview

Signal word
Warning

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction

FRS SDS Reference Library | S099 | Library page 1051



Appearance Gray **Physical state** Liquid **Odor** Mild

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective clothing, gloves, and eye protection or face shield
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response
Get medical advice/attention if you feel unwell

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Harmful to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
BIS[4-(2,3-EPOXYPROPOXY)PHENYL]PROPANE	1675-54-3	50 - <100%
LIMESTONE	1317-65-3	10 - <25%
SILICON	7440-21-3	1-10
NEOPENTYL GLYCOL DIGLYCIDYL ETHER	17557-23-2	2.5 - <5%

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical

advice/attention.

Skin contact IF ON SKIN:. Wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Use dry chemical, Foam

Unsuitable extinguishing media
None

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other non-combustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

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Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Acids, Bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
LIMESTONE 1317-65-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
SILICON 7440-21-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Gray
Odor Mild
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	> 95 °C / > 203 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	>1	Air = 1
Relative density	1.52	
Water solubility	No information available	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Hyphen	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
Other information		
Softening point	No information available	
Molecular weight	No information available	
Density	No information available	
Bulk density	No information available	
SADT (self-accelerating decomposition temperature)	No information available	

10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability
Stable under normal conditions

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Acids, Bases

Hazardous decomposition products
Carbon oxides
Phenols

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause irritation of respiratory tract.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact May cause skin irritation and/or dermatitis. May cause sensitization by skin contact.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
BIS[4-(2,3-EPOXYPROPOXY)PHENYL]PROPANE 1675-54-3	= 11300 µL/kg (Rat)	= 20000 mg/kg (Rabbit)	-
SILICON 7440-21-3	= 3160 mg/kg (Rat)	-	-
NEOPENTYL GLYCOL DIGLYCIDYL ETHER 17557-23-2	= 4500 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
BIS[4-(2,3-EPOXYPROPOXY)PHENYL]PROPANE 1675-54-3	-	Group 3	-	-

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable as a human carcinogen
NTP (National Toxicology Program)
Known - Known Carcinogen
Occupational Safety and Health Administration of the US Department of Labor
X - Present

Target organ effects Eyes, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 13298 mg/kg
ATEmix (dermal) 36364 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical name	Partition coefficient
BIS[4-(2,3-EPOXYPROPOXY)PHENYL]PROPANE 1675-54-3	2.33

Other adverse effects
No information available

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	Not applicable

14. TRANSPORT INFORMATION

DOT

Proper shipping name Not regulated

IATA

Proper shipping name Not regulated

IMDG

Proper shipping name Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECI	Complies
PICCS	Does not comply
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No

Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
SILICON 7440-21-3	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

Revision Date 15-Aug-2023

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End of Safety Data Sheet

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision Date 18-Nov-2021 **Version** 6

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code 25219

Product Name FAST ORANGE PUMICE LOTION 1 GAL

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Hand Cleaner or Soap - Heavy Duty

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

For further information, please contact

1.4. Emergency telephone number

24-hour emergency phone number - §45 - (EC)1272/2008

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

2.2. Label elements

Signal word
Warning

Hazard statements

Precautionary Statements - EU (§28, 1272/2008) P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

2.3. Other hazards

Harmful to aquatic life.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	REACH registration No.	EC No	Classification according to Regulation	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)

				(EC) No. 1272/2008 [CLP]			
METHYLISOTHIAZOLINONE 2682-20-4	<0.1		220-239-6	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1A (H317) (EUH071) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Skin Sens. 1A :: C>=0.0015%	10	1

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
No information available

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
METHYLISOTHIAZOLINONE 2682-20-4	232 120	200	No data available	No data available	No data available

Additional information
The product contains no substances which at their given concentration, are considered to be hazardous to health
This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Small Fire Dry chemical or CO2.
Large Fire Water spray or fog.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Protective equipment and precautions for firefighters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling No information available.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)
Professional use of hand cleaners.

Identified uses
Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
METHYLISOTHIAZOLINONE 2682-20-4	-	TWA: 0.05 mg/m³	-	-	-

Chemical name	France	Germany	Germany MAK	Greece	Hungary
METHYLISOTHIAZOLINONE 2682-20-4	-	-	TWA: 0.2 mg/m³ Ceiling / Peak: 0.4 mg/m³	-	-

Chemical name	Sweden	Switzerland	United Kingdom
METHYLISOTHIAZOLINONE 2682-20-4	-	TWA: 0.2 mg/m³ STEL: 0.4 mg/m³	-

Biological occupational exposure limits
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state Cream/ Lotion

Appearance	White
Color	No information available
Odor	Citrus
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	No data available	None known
Boiling point / boiling range	> 100 °C	
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Flash point	> 95 °C	
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	6.0-8.5	
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No Data Available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available Soluble in water	
Solubility(ies)	No Data Available	None known
Partition coefficient	No Data Available	None known
Vapor pressure	No Data Available	None known
Relative density	1.02	
Bulk density	No data available	
Density	No data available	
Vapor density	>1	Air = 1
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available > 1 Butyl acetate = 1

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous Decomposition Products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 70,000.00 mg/kg

9.7 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
11.7 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
11.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
11.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
11.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
METHYLISOTHIAZOLINONE	232 - 249 mg/kg (Rat) = 120 mg/kg (Rat)	= 200 mg/kg (Rabbit)	= 0.11 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
METHYLISOTHIAZOLINONE	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	

IMDG

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	
14.7 Maritime transport in bulk according to IMO instruments	

RID

14.1 UN/ID No	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	

ADR

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
METHYLISOTHIAZOLINONE - 2682-20-4	75.	-

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Persistent Organic Pollutants
Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

International Inventories

TSCA	Does not comply
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
EUH071 - Corrosive to the respiratory tract
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H330 - Fatal if inhaled
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend
SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method

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Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Date 18-Nov-2021

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
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End of Safety Data Sheet

SAFETY DATA SHEET

Revision Date 03-Feb-2017 **Version** 4

1. IDENTIFICATION

Product identifier
Product Name FAST ORANGE WIPES 72 CT.

Other means of identification
Product Code 25051
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Scented cleaning wipes
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

May Also Be Distributed by:
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance White **Physical state** Wipes containing liquid **Odor** Citrus

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance(s)
The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES:. Rinse thoroughly with plenty of water, also under the eyelids.

Skin contact None under normal use conditions.

Inhalation None under normal use conditions.

Ingestion IF SWALLOWED:. Call a POISON CENTER or doctor/physician if you feel unwell.

Self-protection of the first aider Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep in a dry place.

Incompatible materials None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .
Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Eyewash stations

Individual protection measures, such as personal protective equipment

Eye/face protection None under normal use conditions.

Skin and body protection None under normal use conditions.

Respiratory protection None under normal use conditions.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Wipes containing liquid
Appearance White
Odor Citrus
Odor threshold No information available

Property	Values	Remarks • Method
pH	4.0-7.0	
Melting point / freezing point	No information available	

Boiling point / boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	0.985-1.005
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
None known

Hazardous Decomposition Products
None under normal use conditions

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Not an expected route of exposure.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	No known hazard in contact with skin.
Ingestion	Ingestion may cause irritation to mucous membranes.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 316667 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

99.42 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number Not applicable

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

IMDG
Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories
TSCA Complies

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DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Not determined
IECSC	Complies
KECL	Not determined
PICCS	Not determined
AICS	Not determined

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product is not known to contain any chemicals listed as carcinogens or reproductive toxins.

U.S. State Right-to-Know Regulations

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 0	**Flammability** 0	**Instability** 0	-
HMIS	**Health hazards** 0	**Flammability** 0	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 03-Feb-2017

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Revision Date 13-Jun-2023 **Version** 13

1. IDENTIFICATION

Product identifier
Product Name HIGH STRENGTH THREADLOCKER RED 6ML

Other means of identification
Product Code 27100

Recommended use of the chemical and restrictions on use
Recommended Use Adhesive
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
ITW Permatex, Inc.
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502

May Also Be Distributed by:
ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

24-hour emergency phone number
Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Signal word
Danger

Causes skin irritation
Causes serious eye irritation
May cause cancer
May cause damage to organs through prolonged or repeated exposure



Appearance Red **Physical state** Liquid **Odor** Mild

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response
If exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage
Protect from sunlight. Store in a well-ventilated place
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
DIMETHYLBENZYL HYDROPEROXIDE	80-15-9	1 - 5
CUMENE	98-82-8	0.1 - 1

4. FIRST AID MEASURES

Description of first aid measures

General advice If symptoms persist, call a physician.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin contact Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation Immediate medical attention is not required. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. Do NOT induce vomiting.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use, Use dry chemical, Carbon dioxide (CO2), Water spray (fog), Alcohol resistant foam

Unsuitable extinguishing media
None

Specific hazards arising from the chemical
Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other non-combustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Take precautionary

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measures against static discharges.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible materials Strong oxidizing agents, Peroxides, Reducing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
CUMENE 98-82-8	TWA: 5 ppm	TWA: 50 ppm TWA: 245 mg/m^3 (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m^3 (vacated) S* S*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m^3

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Red
Odor Mild
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	200 °C / 392 °F	
Flash point	131 °C / 267.8 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.11	
Water solubility	Immiscible in water	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Hyphen	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	500 mPas @ 20°C (68°F)	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
Density	No information available
Bulk density	No information available
SADT (self-accelerating decomposition temperature)	No information available

10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability
Stable under normal conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Strong oxidizing agents, Peroxides, Reducing agents

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	= 382 mg/kg (Rat)	= 0.126 mL/kg (Rabbit)	= 220 ppm (Rat) 4 h
CUMENE 98-82-8	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
CUMENE 98-82-8	A3	Group 2B	Reasonably Anticipated	X

IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable as a human carcinogen
Group 2B - Possibly Carcinogenic to Humans
NTP (National Toxicology Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 6490 mg/kg
ATEmix (dermal) 19018 mg/kg
ATEmix (inhalation-dust/mist) 12.5 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.08 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical name	Partition coefficient
CUMENE 98-82-8	3.7

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

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Contaminated packaging Do not reuse container.

US EPA Waste Number U055 U096

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	Toxic Ignitable
CUMENE 98-82-8	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

Proper shipping name Not regulated

IATA

Proper shipping name Not regulated

IMDG

Proper shipping name Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
DIMETHYLBENZYL HYDROPEROXIDE - 80-15-9	1.0
CUMENE - 98-82-8	0.1

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No

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Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ
CUMENE 98-82-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
CUMENE 98-82-8	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
SACCHARIN 81-07-2	X	X	X
CUMENE 98-82-8	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards**	2	**Flammability**	1	**Instability**	0	-
HMIS	**Health hazards**	2	**Flammability**	1	**Physical hazards**	0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 13-Jun-2023

Disclaimer
Illinois Tool Works Inc. believes the information contained in this data sheet is accurate as of the date compiled. However, Illinois Tool Works Inc. makes no warranty, express or implied, as to the accuracy, reliability or completeness of the information. User is responsible for evaluating whether such information or this product is fit for a particular purpose and suitable for a particular use or application. The information in this data sheet may not be valid if this product is used in combination with other products or in processes for which it was not designed. Illinois Tool Works Inc. disclaims any liability for consequential or incidental damages of any kind, including lost profits, arising from the sale or use of this product. Ensure you have the most current version of this data sheet by contacting us or reviewing our web site.

End of Safety Data Sheet

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SAFETY DATA SHEET

Revision Date 18-Oct-2016 **Version** 9

1. IDENTIFICATION

Product identifier
Product Name MEDIUM STRENGTH THREADLOCKER BLUE 6 ML

Other means of identification
Product Code 24200
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Adhesive
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufactured and Distributed by:
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

May Also Be Distributed by:
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

Company Phone Number 1-87-Permatex
(877) 376-2839
24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Warning

Causes skin irritation
Causes serious eye irritation
May cause damage to organs through prolonged or repeated exposure

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Appearance Blue **Physical state** Liquid **Odor** Mild

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
POLYGLYCOL DIMETHACRYLATE	25852-47-5	40 - 70	*
DIMETHYLBENZYL HYDROPEROXIDE	80-15-9	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash skin with soap and water. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

FRS SDS Reference Library | S103 | Library page 1086

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents, Peroxides, Reducing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .
NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Blue
Odor	Mild
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 149 °C / >300 °F	
Flash point	> 93 °C / > 200 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	>1	Air = 1
Relative density	1.00-1.15	
Water solubility	Insoluble	

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Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	<3%
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Peroxides, Reducing agents

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure if inhaled.
Eye contact	Irritating to eyes. May cause redness and tearing of the eyes.
Skin contact	Prolonged contact may cause redness and irritation.
Ingestion	Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	= 382 mg/kg (Rat)	= 0.126 mL/kg (Rabbit)	= 220 ppm (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Not classifiable as a human carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 18864 mg/kg
ATEmix (dermal) 54321 mg/kg
ATEmix (inhalation-dust/mist) 24.7 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.376 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number Not applicable

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

IMDG

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Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not determined
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
DIMETHYLBENZYL HYDROPEROXIDE - 80-15-9	1.0
SACCHARIN - 81-07-2	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
TITANIUM DIOXIDE - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

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Chemical Name	New Jersey	Massachusetts	Pennsylvania
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	X	X	X
SACCHARIN 81-07-2	X	X	X
PROPYLENE GLYCOL 57-55-6	X	-	X
TITANIUM DIOXIDE 13463-67-7	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 18-Oct-2016

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

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SAFETY DATA SHEET

Revision Date 17-Aug-2017 **Version** 6

1. IDENTIFICATION

Product identifier
Product Name PX 16BR BLACK RTV SILICONE 3 OZ.

Other means of identification
Product Code 81158
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Sealant
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

May Also Be Distributed by:
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Carcinogenicity	Category 2

Label elements

Emergency Overview

Signal word
Warning

Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing cancer

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Appearance Black **Physical state** Paste **Odor** Mild

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Not applicable

Unknown acute toxicity 29.274 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	3 - 7	*
2-BUTANONE OXIME	96-29-7	1 - 5	*

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Flood with water to complete polymerization and scrape off floor. Sweep up and shovel into suitable containers for disposal. Slippery, can cause falls if walked on.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Protect from moisture.

Incompatible materials Strong oxidizing agents, Acids, Water

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .
NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Paste
Appearance	Black
Odor	Mild
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	Not Applicable	Polymerization
Flash point	> 93 °C / > 200 °F	Tag Closed Cup
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	<5 mm Hg	
Vapor density	3.0	Air = 1
Relative density	1.43	
Water solubility	Not applicable	Polymerization

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Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	3.2%, 45.87 g/l
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Acids, Water

Hazardous Decomposition Products
Carbon oxides
Nitrogen oxides (NOx)
Formaldehyde
May release 2-butanone oxime (ethyl methyl ketoxime) at elevated temperature

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause irritation of respiratory tract.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact May cause skin irritation and/or dermatitis. May cause sensitization by skin contact.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
2-BUTANONE OXIME 96-29-7	= 930 mg/kg (Rat)	1000 - 1800 mg/kg (Rabbit)	> 4800 mg/m³ (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.
ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present
Target Organ Effects Eyes, Lymphatic System, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 14090 mg/kg
ATEmix (dermal) 9616 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

95.074 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical Name	Partition coefficient
2-BUTANONE OXIME 96-29-7	0.65

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number Not applicable

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

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IMDG

Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Not determined
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
CARBON BLACK - 1333-86-4	*Carcinogen (airborne, unbound particles of respirable size)
SILICA, QUARTZ - 14808-60-7	*Carcinogen (airborne particles of respirable size only)

• *The asterisked chemical(s) listed are not subject to Proposition 65 because they are not airborne in the finished product

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
LIMESTONE	X	X	X

1317-65-3			
CARBON BLACK 1333-86-4	X	X	X
SILICA, QUARTZ 14808-60-7	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 17-Aug-2017

Disclaimer
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End of Safety Data Sheet

SAFETY DATA SHEET

Revision Date 21-Oct-2015 **Version** 2

1. IDENTIFICATION

Product identifier
Product Name SA9 BATTERY PROTECTOR & SEALER 5 OZ AE

Other means of identification
Product Code 80370
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Battery Sealant
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

Distributor
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

Company Phone Number 1-87-Permatex
(877) 376-2839

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Aspiration toxicity	Category 1
Flammable aerosols	Category 1
Gases under pressure	Liquefied gas

Label elements

Emergency Overview

Danger

Causes skin irritation
Causes serious eye irritation
May cause drowsiness or dizziness
May be fatal if swallowed and enters airways
Extremely flammable aerosol

Contains gas under pressure; may explode if heated



Appearance Purple **Physical state** Liquid Flammable Aerosol **Odor** Solvent

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Do not spray on an open flame or other ignition source
Pressurized container: Do not pierce or burn, even after use

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do NOT induce vomiting

Precautionary Statements - Storage
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
ACETONE	67-64-1	15-35	*
XYLENE	1330-20-7	10 - 30	*
PROPANE	74-98-6	15-30	*
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	5-25	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

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4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash skin with soap and water. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Call a physician or poison control center immediately. Do NOT induce vomiting.

Self-protection of the first aider Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Eliminate all ignition sources if safe to do so. Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required. Contents under pressure. Do not puncture or incinerate cans.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible materials Strong oxidizing agents, Strong bases, Strong acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ACETONE 67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m³ (vacated) STEL: 2400 mg/m³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m³
XYLENE 1330-20-7	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m³	-
PROPANE 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m³

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.
Respiratory protection	Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid; Flammable Aerosol
Appearance	Purple
Odor	Solvent
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	< -18 °C / < 0 °F	Gives a flame projection at full valve opening or flashback at any degree of valve opening
Evaporation rate	> 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	>1	Air = 1
Relative density	0.85	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	45%
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions

FRS SDS Reference Library | S105 | Library page 1104

None under normal processing.

Conditions to avoid
Heat, flames and sparks. Temperatures >50 °C / 122 °F.

Incompatible materials
Strong oxidizing agents, Strong bases, Strong acids

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause drowsiness or dizziness.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact May cause skin irritation and/or dermatitis.

Ingestion Potential for aspiration if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
ACETONE 67-64-1	= 5800 mg/kg (Rat)	-	= 50100 mg/m³ (Rat) 8 h
XYLENE 1330-20-7	= 3500 mg/kg (Rat)	> 1700 mg/kg (Rabbit) > 4350 mg/kg (Rabbit)	= 29.08 mg/L (Rat) 4 h = 5000 ppm (Rat) 4 h
PROPANE 74-98-6	-	-	= 658 mg/L (Rat) 4 h
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
XYLENE 1330-20-7	-	Group 3	-	-

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Not classifiable as a human carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Target Organ Effects Central nervous system, Eyes, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 7132 mg/kg
ATEmix (dermal) 5971 mg/kg
ATEmix (inhalation-gas) 2432615 mg/l
ATEmix (inhalation-dust/mist) 7.5 mg/l

12. ECOLOGICAL INFORMATION

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Ecotoxicity

15 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
ACETONE 67-64-1	-	4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50	10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50
XYLENE 1330-20-7	-	13.4: 96 h Pimephales promelas mg/L LC50 flow-through 2.661 - 4.093: 96 h Oncorhynchus mykiss mg/L LC50 static 13.5 - 17.3: 96 h Oncorhynchus mykiss mg/L LC50 13.1 - 16.5: 96 h Lepomis macrochirus mg/L LC50 flow-through 19: 96 h Lepomis macrochirus mg/L LC50 7.711 - 9.591: 96 h Lepomis macrochirus mg/L LC50 static 23.53 - 29.97: 96 h Pimephales promelas mg/L LC50 static 780: 96 h Cyprinus carpio mg/L LC50 semi-static 780: 96 h Cyprinus carpio mg/L LC50 30.26 - 40.75: 96 h Poecilia reticulata mg/L LC50 static	3.82: 48 h water flea mg/L EC50 0.6: 48 h Gammarus lacustris mg/L LC50
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT 64742-47-8	-	45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static 2.4: 96 h Oncorhynchus mykiss mg/L LC50 static	4720: 96 h Den-dronereides heteropoda mg/L LC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical Name	Partition coefficient
ACETONE 67-64-1	-0.24
XYLENE 1330-20-7	2.77 - 3.15
PROPANE 74-98-6	2.3

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated packaging Do not reuse container.

US EPA Waste Number D001

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Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
ACETONE 67-64-1	-	Included in waste stream: F039	-	U002
XYLENE 1330-20-7	-	Included in waste stream: F039	-	U239

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
ACETONE 67-64-1	Ignitable
XYLENE 1330-20-7	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no	1950
Proper shipping name:	Aerosols, Limited Quantity (LQ)
Hazard Class	2.1
Emergency Response Guide Number	126

IATA

UN/ID no	ID 8000
Proper shipping name:	Consumer commodity
Hazard Class	9
ERG Code	9L

IMDG

UN/ID no	1950
Proper shipping name:	Aerosols, Limited Quantity (LQ)
Hazard Class	2.1
EmS-No	F-D, S-U

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
XYLENE - 1330-20-7	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
XYLENE 1330-20-7	100 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
ACETONE 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
XYLENE 1330-20-7	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
ACETONE 67-64-1	X	X	X
XYLENE 1330-20-7	X	X	X
PROPANE 74-98-6	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class

A Compressed gases, B5 - Flammable aerosol, D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 3	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 3	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 21-Oct-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the

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date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision Date 05-Mar-2025 **Version** 1

1. Identification

Product identifier

Product Name SA9 BATTERY PROTECTOR & SEALER 5 OZ AE

Other means of identification

Product Code 80370

UN number or ID number 1950

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Battery Sealant

Restrictions on use No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex, Inc.
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502

May Also Be Distributed by:
ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

E-mail address mail@permatex.com

Emergency telephone number

Company Phone Number 866-732-9502

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

24-hour emergency phone number No information available

2. Hazard(s) identification

Classification

Aerosols	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3

Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Contains ACETONE; PETROLATUM; CUMENE; ETHYL BENZENE



Danger

Hazard statements
Extremely flammable aerosol.
Pressurized container: May burst if heated.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements - Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Wash face, hands and any exposed skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Do not breathe dust.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Pressurized container: Do not pierce or burn, even after use.
Do not spray on an open flame or other ignition source.
Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice and attention.
Skin
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice and attention.
Take off contaminated clothing and wash before reuse.
Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary Statements - Storage
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Protect from sunlight.
Precautionary Statements - Disposal
Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

25 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
31 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
55 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
80 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
37 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Other Information

May be harmful in contact with skin. May be harmful if inhaled. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
PROPANE	74-98-6	10-30%	-	-
ACETONE	67-64-1	10-30%	-	-
PETROLATUM	8009-03-8	10-30%	-	-
XYLENE	1330-20-7	10-30%	-	-
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	3-7%	-	-
ETHYL BENZENE	100-41-4	1-5%	-	-
CUMENE	98-82-8	0.1-1%	-	-

4. First-aid measures

Description of first aid measures

General advice IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Effects of Exposure May cause cancer. May cause damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Small Fire In case of fire, use water spray, foam, dry chemical, or CO2.
Large Fire In case of fire, use water spray, foam, dry chemical, or CO2.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Hazardous combustion products No information available.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

8. Exposure controls/personal protection

Control Parameters
Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
PROPANE 74-98-6	: See Appendix F: Minimal Oxygen Content, explosion hazard Simple asphyxiant	TWA: 1000 ppm TWA: 1800 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m³
ACETONE 67-64-1	TWA: 250 ppm STEL: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m³ (vacated) STEL: 2400 mg/m³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors. (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m³
XYLENE 1330-20-7	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m³	-
ETHYL BENZENE 100-41-4	TWA: 20 ppm Ototoxicant - potential to cause hearing disorders	TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 125 ppm (vacated) STEL: 545 mg/m³	IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m³ STEL: 125 ppm STEL: 545 mg/m³
CUMENE 98-82-8	TWA: 5 ppm	TWA: 50 ppm TWA: 245 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m³ (vacated) Sk* Sk*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m³

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Chemical name	Alberta	British Columbia	Ontario	Quebec
PROPANE 74-98-6	TWA: 1000 ppm	Simple asphyxiant	TWA: Simple asphyxiant (See Appendix F: Minimal Oxygen Content;explosion hazard)	Simple asphyxiant
ACETONE 67-64-1	TWA: 500 ppm TWA: 1200 mg/m³ STEL: 750 ppm STEL: 1800 mg/m³	TWA: 250 ppm STEL: 500 ppm	TWA: 250 ppm STEL: 500 ppm	TWA: 500 ppm TWA: 1190 mg/m³ STEL: 1000 ppm STEL: 2380 mg/m³
XYLENE 1330-20-7	TWA: 100 ppm TWA: 434 mg/m³ STEL: 150 ppm STEL: 651 mg/m³	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 434 mg/m³ STEL: 150 ppm STEL: 651 mg/m³
ETHYL BENZENE 100-41-4	TWA: 100 ppm TWA: 434 mg/m³ STEL: 125 ppm STEL: 543 mg/m³	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm
CUMENE 98-82-8	TWA: 50 ppm TWA: 246 mg/m³	TWA: 25 ppm STEL: 75 ppm	TWA: 50 ppm	TWA: 5 ppm

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
PROPANE	TWA: Simple asphyxiant (See Appendix F: Minimal Oxygen Content)	TWA:	TWA:	TWA: Simple asphyxiant
ACETONE	TWA: 250 ppm STEL: 500 ppm	TWA: 250 ppm STEL: 500 ppm	TWA: 250 ppm STEL: 500 ppm	TWA: 250 ppm STEL: 500 ppm
XYLENE	TWA: 20 ppm	TWA: 100 ppm STEL: 150 ppm	TWA: 20 ppm	TWA: 20 ppm
ETHYL BENZENE	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm	TWA: 20 ppm
CUMENE	TWA: 5 ppm	TWA: 50 ppm	TWA: 5 ppm	TWA: 5 ppm

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
PROPANE	TWA: 1000 ppm STEL: 1250 ppm	TWA:	TWA: 1000 ppm STEL: 1250 ppm	Simple asphyxiant
ACETONE	TWA: 500 ppm STEL: 750 ppm	TWA: 250 ppm STEL: 500 ppm	TWA: 500 ppm STEL: 750 ppm	TWA: 1000 ppm TWA: 2400 mg/m³ STEL: 1250 ppm STEL: 3000 mg/m³
XYLENE	TWA: 100 ppm STEL: 150 ppm	TWA: 20 ppm	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 435 mg/m³ STEL: 150 ppm STEL: 650 mg/m³ Sk*
ETHYL BENZENE	TWA: 100 ppm STEL: 125 ppm Designated substance	TWA: 20 ppm	TWA: 100 ppm STEL: 125 ppm Designated Chemical Substance	TWA: 100 ppm TWA: 435 mg/m³ STEL: 125 ppm STEL: 545 mg/m³
CUMENE	TWA: 50 ppm STEL: 74 ppm	TWA: 5 ppm	TWA: 50 ppm STEL: 74 ppm	TWA: 50 ppm TWA: 245 mg/m³ STEL: 75 ppm

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
				STEL: 365 mg/m³ Sk*

Biological occupational exposure limits

Chemical name	ACGIH
ACETONE 67-64-1	25 mg/L - urine (Acetone) - end of shift
XYLENE 1330-20-7	0.3 g/g creatinine - urine (total of all isomers of Methylhippuric acids) - end of shift
ETHYL BENZENE 100-41-4	150 mg/g creatinine - urine (Sum of mandelic acid and phenylglyoxylic acid) - end of shift

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

Thermal hazards No information available.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Aerosol
Appearance No information available
Color Purple
Odor No information available
Odor threshold No information available

Property	Values	Remarks • Method
pH	No data available	
Melting point / freezing point	No data available	
Boiling point / boiling range	32 °C / 89.6 °F	

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Flash point	-104 °C / -155.2 °F	Gives a flame projection at full valve opening or flashback at any degree of valve opening
Evaporation rate	Not applicable	
Flammability (solid, gas)	No data available	
Flammability Limit in Air		
Upper flammability limit:	12%	-
Lower flammability limit:	2.5%	-
Vapor pressure	>60 psig @ 21.1°C (70°F)	
Vapor density	No data available	
Relative density	0.85	
Water solubility	No data available	
Solubility(ies)	No Data Available	
Partition coefficient	No Data Available	
Autoignition temperature	451.3°C (844.35°F)	
Decomposition temperature	No data available	
Kinematic viscosity	No Data Available	
Dynamic viscosity	No data available	

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization No information available.

Conditions to avoid Heat, flames and sparks.

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness. May be harmful if inhaled.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Acute toxicity .

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	6,327.40 mg/kg
ATEmix (dermal)	3,745.20 mg/kg
ATEmix (inhalation-gas)	360,000.00 ppm
ATEmix (inhalation-vapor)	99,999.0000 mg/l
ATEmix (inhalation-dust/mist)	5.14 mg/l

25 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
31 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
55 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
80 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
37 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
PROPANE 74-98-6	-	-	> 800000 ppm (Rat) 15 min
ACETONE 67-64-1	= 5800 mg/kg (Rat)	> 15700 mg/kg (Rabbit)	= 50100 mg/m³ (Rat) 8 h
PETROLATUM 8009-03-8	-	= 3600 mg/kg (Rabbit)	-
XYLENE 1330-20-7	= 3500 mg/kg (Rat)	> 4350 mg/kg (Rabbit)	= 29.08 mg/L (Rat) 4 h
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
ETHYL BENZENE 100-41-4	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.4 mg/L (Rat) 4 h
CUMENE 98-82-8	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

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The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
XYLENE 1330-20-7	-	Group 3	-	-
ETHYL BENZENE 100-41-4	A3	Group 2B	-	X
CUMENE 98-82-8	A3	Group 2B	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
Occupational Safety and Health Administration of the US Department of Labor
X - Present

Reproductive toxicity No information available.

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
ACETONE 67-64-1	-	LC50: 4.74 - 6.33mL/L (96h, Oncorhynchus mykiss) LC50: 6210 - 8120mg/L (96h, Pimephales promelas) LC50: =8300mg/L (96h, Lepomis macrochirus)	-	EC50: 10294 - 17704mg/L (48h, Daphnia magna) EC50: 12600 - 12700mg/L (48h, Daphnia magna)
XYLENE 1330-20-7	-	LC50: =13.4mg/L (96h, Pimephales promelas) LC50: 2.661 - 4.093mg/L (96h, Oncorhynchus mykiss) LC50: 13.5 - 17.3mg/L (96h, Oncorhynchus mykiss) LC50: 13.1 - 16.5mg/L (96h, Lepomis macrochirus) LC50: =19mg/L (96h, Lepomis macrochirus)	-	EC50: =3.82mg/L (48h, water flea) LC50: =0.6mg/L (48h, Gammarus lacustris)

		LC50: 7.711 - 9.591mg/L (96h, Lepomis macrochirus) LC50: 23.53 - 29.97mg/L (96h, Pimephales promelas) LC50: =780mg/L (96h, Cyprinus carpio) LC50: >780mg/L (96h, Cyprinus carpio) LC50: 30.26 - 40.75mg/L (96h, Poecilia reticulata)		
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT 64742-47-8	-	LC50: =45mg/L (96h, Pimephales promelas) LC50: =2.2mg/L (96h, Lepomis macrochirus) LC50: =2.4mg/L (96h, Oncorhynchus mykiss)	-	-
ETHYL BENZENE 100-41-4	EC50: =4.6mg/L (72h, Pseudokirchneriella subcapitata) EC50: >438mg/L (96h, Pseudokirchneriella subcapitata) EC50: 2.6 - 11.3mg/L (72h, Pseudokirchneriella subcapitata) EC50: 1.7 - 7.6mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 11.0 - 18.0mg/L (96h, Oncorhynchus mykiss) LC50: =4.2mg/L (96h, Oncorhynchus mykiss) LC50: 7.55 - 11mg/L (96h, Pimephales promelas) LC50: =32mg/L (96h, Lepomis macrochirus) LC50: 9.1 - 15.6mg/L (96h, Pimephales promelas) LC50: =9.6mg/L (96h, Poecilia reticulata)	-	EC50: 1.8 - 2.4mg/L (48h, Daphnia magna)
CUMENE 98-82-8	EC50: =2.6mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 6.04 - 6.61mg/L (96h, Pimephales promelas) LC50: =4.8mg/L (96h, Oncorhynchus mykiss) LC50: =2.7mg/L (96h, Oncorhynchus mykiss) LC50: =5.1mg/L (96h, Poecilia reticulata)	-	EC50: =0.6mg/L (48h, Daphnia magna) EC50: 7.9 - 14.1mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
PROPANE 74-98-6	1.09
ACETONE 67-64-1	-0.24
XYLENE 1330-20-7	3.15
ETHYL BENZENE 100-41-4	3.6
CUMENE	3.55

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98-82-8	

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

US EPA Waste Number Waste designations and classifications should be determined by the end user based on the application for which the product was used.

14. Transport information

DOT

UN number or ID number 1950
Proper shipping name Aerosols, Limited Quantity (LQ)
Transport hazard class(es) 2.1
Emergency Response Guide Number 126

TDG

UN number or ID number 1950
UN proper shipping name Aerosols, Limited Quantity (LQ)
Transport hazard class(es) 2.1

MEX

UN number or ID number 1950
UN proper shipping name Aerosols, Limited Quantity (LQ)
Transport hazard class(es) 2.1

IATA

UN number or ID number ID 8000
UN proper shipping name Consumer Commodity
Transport hazard class(es) 9
ERG Code 9L

IMDG

UN number or ID number 1950
UN proper shipping name Aerosols, Limited Quantity (LQ)
Transport hazard class(es) 2.1
EmS-No. F-D, S-U

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECI	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
XYLENE - 1330-20-7	1.0
ETHYL BENZENE - 100-41-4	0.1
CUMENE - 98-82-8	0.1

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
XYLENE 1330-20-7	100 lb	-	-	X
ETHYL BENZENE 100-41-4	1000 lb	X	X	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous	Reportable Quantity (RQ)

		Substances RQs	
ACETONE 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
XYLENE 1330-20-7	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ
ETHYL BENZENE 100-41-4	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ
CUMENE 98-82-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
ETHYL BENZENE - 100-41-4	Carcinogen
CUMENE - 98-82-8	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
ACETONE 67-64-1	X	X	X
PROPANE 74-98-6	X	X	X
XYLENE 1330-20-7	X	X	X
ETHYL BENZENE 100-41-4	X	X	X
CUMENE 98-82-8	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA **Health hazards** 2 **Flammability** 4 **Instability** 0 **Special hazards** -
HMIS **Health hazards** 2 * **Flammability** 4 **Physical hazards** 0 **Personal protection** X
Chronic Hazard Star Legend ** = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend
SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity
ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitizers		

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Date 05-Mar-2025

Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Revision Date 14-Oct-2024 **Version** 1

1. Identification

Product identifier

Product Name ULTRA BLACK GASKET MAKER 3 OZ

Other means of identification

Product Code 82180

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Sealant

Restrictions on use No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex, Inc.
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502

May Also Be Distributed by:
ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

E-mail address mail@permatex.com

Emergency telephone number

Company Phone Number 866-732-9502

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

24-hour emergency phone number No information available

2. Hazard(s) identification

Classification

Skin sensitization	Category 1
Carcinogenicity	Category 1B

Label elements

Contains CARBON BLACK; 2-BUTANONE OXIME



Danger

Hazard statements
May cause an allergic skin reaction.
May cause cancer.

Precautionary Statements - Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Avoid breathing dust, fume, gas, mist, vapors and spray.
Contaminated work clothing should not be allowed out of the workplace.
Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.
Skin
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice and attention.
Wash contaminated clothing before reuse.

Precautionary Statements - Storage
Store locked up.
Precautionary Statements - Disposal
Dispose of contents and container to an approved waste disposal plant.

3.09 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
42.24 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
42.24 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
10.74 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Other Information
May be harmful in contact with skin. Harmful to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
CALCIUM CARBONATE	471-34-1	15-40%	-	-
LIMESTONE	1317-65-3	10-30%	-	-
SYNTHETIC ISOPARAFFINIC HYDROCARBON	64742-47-8	3-7%	-	-
STEARIC ACID	57-11-4	1-5%	-	-
CARBON BLACK	1333-86-4	0.1-1%	-	-
2-BUTANONE OXIME	96-29-7	0.1-1%	-	-

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Ingestion Rinse mouth.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Effects of Exposure May cause cancer.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Small Fire In case of fire, use water spray, foam, dry chemical, or CO2.
Large Fire In case of fire, use water spray, foam, dry chemical, or CO2.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by skin contact.

Hazardous combustion products No information available.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control parameters
Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
CALCIUM CARBONATE 471-34-1	-	-	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
LIMESTONE 1317-65-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
STEARIC ACID 57-11-4	TWA: 10 mg/m³ inhalable particulate matter TWA: 3 mg/m³ respirable particulate matter	-	-
CARBON BLACK 1333-86-4	TWA: 3 mg/m³ inhalable particulate matter	TWA: 3.5 mg/m³ (vacated) TWA: 3.5 mg/m³	IDLH: 1750 mg/m³ TWA: 3.5 mg/m³ TWA: 0.1 mg/m³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

Chemical name	Alberta	British Columbia	Ontario	Quebec
CALCIUM CARBONATE 471-34-1	TWA: 10 mg/m³	-	-	TWA: 10 mg/m³
LIMESTONE 1317-65-3	TWA: 10 mg/m³	TWA: 10 mg/m³ TWA: 3 mg/m³ STEL: 20 mg/m³	-	TWA: 10 mg/m³
STEARIC ACID 57-11-4	-	TWA: 10 mg/m³ TWA: 3 mg/m³	TWA: 10 mg/m³ TWA: 3 mg/m³	TWA: 10 mg/m³ TWA: 3 mg/m³
CARBON BLACK 1333-86-4	TWA: 3.5 mg/m³	TWA: 3 mg/m³	TWA: 3 mg/m³	TWA: 3 mg/m³

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
STEARIC ACID	TWA: 10 mg/m³ TWA: 3 mg/m³		TWA: 10 mg/m³ TWA: 3 mg/m³	TWA: 10 mg/m³ TWA: 3 mg/m³
CARBON BLACK	TWA: 3 mg/m³	TWA: 3 mg/m³	TWA: 3 mg/m³	TWA: 3 mg/m³

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
CALCIUM CARBONATE	TWA: 10 mg/m³ STEL: 20 mg/m³		TWA: 10 mg/m³ STEL: 20 mg/m³	TWA: 30 mppcf TWA: 10 mg/m³ STEL: 20 mg/m³
LIMESTONE	TWA: 10 mg/m³ STEL: 20 mg/m³		TWA: 10 mg/m³ STEL: 20 mg/m³	TWA: 30 mppcf TWA: 10 mg/m³ STEL: 20 mg/m³
STEARIC ACID		TWA: 10 mg/m³ TWA: 3 mg/m³		
CARBON BLACK	TWA: 3.5 mg/m³ STEL: 7 mg/m³	TWA: 3 mg/m³	TWA: 3.5 mg/m³ STEL: 7 mg/m³	TWA: 3.5 mg/m³ STEL: 7 mg/m³

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

Thermal hazards No information available.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Paste / Gel Liquid
Appearance Paste
Color Black
Odor Mild
Odor threshold No information available

Property	Values	Remarks • Method
pH	No data available	10% in deionized water
Melting point / freezing point	No data available	Estimated
Boiling point / boiling range	No data available	Polymerization
Flash point	> 95 °C / 203 °F	Tag Closed Cup

Evaporation rate	Not applicable	Butyl acetate = 1
Flammability (solid, gas)	No data available	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	<5 mm Hg @ 80°F	
Vapor density	>1	Air = 1
Relative density	1.44	
Water solubility	No data available Not applicable None known	Polymerization
Solubility(ies)	No Data Available	None known
Partition coefficient	No Data Available	None known
Autoignition temperature	No data available	Estimated
Decomposition temperature	No data available	Remarks: Self-Accelerating decomposition temperature (SADT): 50 °C SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.
Kinematic viscosity	No Data Available	Kinematic viscosity at 100 degrees C
Dynamic viscosity	No data available	Remarks: Self-Accelerating decomposition temperature (SADT): 50 °C SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	3%
Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is

not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May be harmful in contact with skin.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity .

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 12,206.40 mg/kg
ATEmix (dermal) 4,736.40 mg/kg
ATEmix (inhalation-gas) 99,999.00 ppm
ATEmix (inhalation-vapor) 99,999.00 mg/l
ATEmix (inhalation-dust/mist) 8.50 mg/l

3.09 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
42.24 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
42.24 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
10.74 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
CALCIUM CARBONATE 471-34-1	= 6450 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 3 mg/L (Rat) 4 h
SYNTHETIC ISOPARAFFINIC HYDROCARBON 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
STEARIC ACID 57-11-4	= 4600 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-
CARBON BLACK 1333-86-4	> 10000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 4.6 mg/m^3 (Rat) 4 h
2-BUTANONE OXIME 96-29-7	= 930 mg/kg (Rat)	1000 - 1800 mg/kg (Rabbit)	> 4.83 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
CARBON BLACK 1333-86-4	A3	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Occupational Safety and Health Administration of the US Department of Labor
X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
SYNTHETIC ISOPARAFFINIC HYDROCARBON 64742-47-8	-	LC50: =45mg/L (96h, Pimephales promelas) LC50: =2.2mg/L (96h, Lepomis macrochirus) LC50: =2.4mg/L (96h, Oncorhynchus mykiss)	-	-
2-BUTANONE OXIME 96-29-7	EC50: =83mg/L (72h, Desmodesmus subspicatus)	LC50: 777 - 914mg/L (96h, Pimephales promelas) LC50: =760mg/L (96h, Poecilia reticulata)	-	EC50: =750mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
2-BUTANONE OXIME 96-29-7	0.65

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number Waste designations and classifications should be determined by the end user based on the application for which the product was used.

14. Transport information

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECI	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
CARBON BLACK - 1333-86-4	*Carcinogen (airborne, unbound particles of respirable size)
SILICA, QUARTZ - 14808-60-7	*Carcinogen (airborne particles of respirable size only)

*The asterisked chemical(s) listed are not subject to Proposition 65 because they are not airborne in the finished product

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
LIMESTONE 1317-65-3	X	X	X
ALUMINIUM POWDER 7429-90-5	X	X	X
CARBON BLACK 1333-86-4	X	X	X
SILICA, QUARTZ 14808-60-7	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2 *	**Flammability** 1	**Physical hazards** 0	**Personal protection** X

Chronic Hazard Star Legend ** = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend
SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity
ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitizers		

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Date 14-Oct-2024

Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

Revision Date 04-Jan-2016 **Version** 2

1. IDENTIFICATION

Product identifier
Product Name ULTRA BLACK GASKET MAKER 3.35OZ

Other means of identification
Product Code 82180
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Sealant
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

Distributor
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

Company Phone Number 1-87-Permatex
(877) 376-2839

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Carcinogenicity	Category 2

Label elements

Emergency Overview

Warning

Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing cancer

FRS SDS Reference Library | S108 | Library page 1136



Appearance Black **Physical state** Paste **Odor** Mild

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- Not applicable

Unknown acute toxicity 25.95 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
POLY (DIMETHYLSILOXANE), HYDROXY TERMINATED	70131-67-8	15 - 40	*
CALCIUM CARBONATE	471-34-1	15 - 40	*
SYNTHETIC ISOPARAFFINIC HYDROCARON	64742-47-8	3 - 7	*
2-BUTANONE OXIME	96-29-7	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Flood with water to complete polymerization and scrape off floor. Sweep up and shovel into suitable containers for disposal. Slippery, can cause falls if walked on.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Protect from moisture.

Incompatible materials Strong oxidizing agents, Acids, Water

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
CALCIUM CARBONATE 471-34-1	-	-	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Paste
Appearance Black
Odor Mild
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	Not Applicable	Polymerization
Flash point	> 93 °C / > 200 °F	Tag Closed Cup
Evaporation rate	No information available	

Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	<5 mm Hg @ 80°F	
Vapor density	>1	Air = 1
Relative density	1.44	
Water solubility	Not applicable	Polymerization
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	3%
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents, Acids, Water

Hazardous Decomposition Products
Carbon oxides
Nitrogen oxides (NOx)
Formaldehyde
May release 2-butanone oxime (ethyl methyl ketoxime) at elevated temperature

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause irritation of respiratory tract.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact May cause skin irritation and/or dermatitis. May cause sensitization by skin contact.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
POLY (DIMETHYLSILOXANE),	-	> 16 mL/kg (Rabbit)	> 8750 mg/m³ (Rat) 7 h

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HYDROXY TERMINATED 70131-67-8			
CALCIUM CARBONATE 471-34-1	= 6450 mg/kg (Rat)	-	-
SYNTHETIC ISOPARAFFINIC HYDROCARON 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
2-BUTANONE OXIME 96-29-7	= 930 mg/kg (Rat)	= 0.2 mg/kg (Rabbit)	= 20 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Target Organ Effects Eyes, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 12170 mg/kg
ATEmix (dermal) 10754 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

93.91 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
SYNTHETIC ISOPARAFFINIC HYDROCARON 64742-47-8	-	45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static 2.4: 96 h Oncorhynchus mykiss mg/L LC50 static	4720: 96 h Den-dronereides heteropoda mg/L LC50
2-BUTANONE OXIME 96-29-7	83: 72 h Desmodesmus subspicatus mg/L EC50	777 - 914: 96 h Pimephales promelas mg/L LC50 flow-through 760: 96 h Poecilia reticulata mg/L LC50 static 320 - 1000: 96 h Leuciscus idus mg/L LC50 static	750: 48 h Daphnia magna mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical Name	Partition coefficient
2-BUTANONE OXIME 96-29-7	0.65

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

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Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	Not applicable

14. TRANSPORT INFORMATION

DOT
Proper shipping name: Not regulated

IATA
Proper shipping name: Not regulated

IMDG
Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not Listed.
ENCS	Not Listed.
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40

CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
CARBON BLACK - 1333-86-4	Carcinogen
SILICA, QUARTZ - 14808-60-7	Carcinogen
ETHANOL - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
LIMESTONE 1317-65-3	X	X	X
ALUMINIUM POWDER 7429-90-5	X	X	X
CARBON BLACK 1333-86-4	X	X	X
SILICA, QUARTZ 14808-60-7	X	X	X
ETHANOL 64-17-5	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 04-Jan-2016

Disclaimer
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End of Safety Data Sheet

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SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 06-Aug-2024 **Version** 3

1. IDENTIFICATION

Product identifier
Product Name ULTRA RED 3 OZ TUBE

Other means of identification
Product Code 81630

Recommended use of the chemical and restrictions on use
Recommended Use Sealant
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex, Inc.
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502
24-hour emergency phone number
Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Red **Physical state** No information available **Odor** Mild

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required

Precautionary Statements - Response
If exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Precautionary Statements - Storage
Protect from sunlight. Store in a well-ventilated place
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
CALCIUM CARBONATE	471-34-1	10 - <25%
IRON OXIDE	1309-37-1	10 - <25%

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact IF ON SKIN:. Wash skin with soap and water. If skin irritation persists, call a physician. Take off contaminated clothing and wash before reuse.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

FRS SDS Reference Library | S109 | Library page 1145

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Use dry chemical, Foam

Unsuitable extinguishing media
None

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use personal protective equipment as required.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
CALCIUM CARBONATE	-	-	TWA: 10 mg/m³ total dust

471-34-1			TWA: 5 mg/m³ respirable dust
IRON OXIDE 1309-37-1	TWA: 5 mg/m³ respirable particulate matter	TWA: 10 mg/m³ fume TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ fume and total dust Iron oxide (vacated) TWA: 5 mg/m³ respirable fraction regulated under Rouge	IDLH: 2500 mg/m³ Fe dust and fume TWA: 5 mg/m³ Fe dust and fume

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	No information available
Appearance	Red
Odor	Mild
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	No information available	
Water solubility	No information available	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Hyphen	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other information

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Softening point	No information available
Molecular weight	No information available
Density	No information available
Bulk density	No information available
SADT (self-accelerating decomposition temperature)	No information available

10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability
Stable under normal conditions

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Excessive heat.

Incompatible materials
Strong oxidizing agents

Hazardous decomposition products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause irritation of respiratory tract.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact May cause skin irritation and/or dermatitis.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
CALCIUM CARBONATE 471-34-1	= 6450 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 3 mg/L (Rat) 4 h
IRON OXIDE 1309-37-1	> 10000 mg/kg (Rat)	-	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
IRON OXIDE 1309-37-1	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Target organ effects Eyes, Respiratory system, Skin.

FRS SDS Reference Library | S109 | Library page 1148

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 15342 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	Not applicable

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT

IATA

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s

IMDG

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECI	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
IRON OXIDE 1309-37-1	X	X	X
ALUMINUM FLAKE 7429-90-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

Revision Date 06-Aug-2024

Disclaimer

Illinois Tool Works Inc. believes the information contained in this data sheet is accurate as of the date compiled. However,Illinois Tool Works Inc. makes no warranty, express or implied, as to the accuracy, reliability or completeness of theinformation. User is responsible for evaluating whether such information or this product is fit for a particular

purposeand suitable for a particular use or application. The information in this data sheet may not be valid if this product is usedin combination with other products or in processes for which it was not designed. Illinois Tool Works Inc. disclaims anyliability for consequential or incidental damages of any kind, including lost profits, arising from the sale or use of thisproduct. Ensure you have the most current version of this data sheet by contacting us or reviewing our web site.

End of Safety Data Sheet

SAFETY DATA SHEET

1. Identification

Product identifier Phospho-MSK1 (S376)/MSK2 (S360) Alexa Fluor® 700 Affinity Purified PAb

Other means of identification

Product code AF1094N

Recommended use For research use only

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name R&D Systems, Inc., a Bio-Techne Brand

Address 614 McKinley Place NE
Minneapolis, MN 55413 USA

Telephone 1-800-343-7475

Email info@bio-techne.com

Emergency phone number For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night:
Within U.S. 1-703-741-5970
Worldwide 1-800-424-9300
Bio-Techne Tel: US: 612-379-2956 or 800-343-7475

2. Hazard(s) identification

Hazards for the product as sold

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Not available.

Response Not available.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS No./Unique ID	%
Sodium azide		26628-22-8	≤ 0.1*
Other components below reportable levels			99.91

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

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Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value
Sodium azide (CAS 26628-22-8)	Ceiling	0.29 mg/m3 0.11 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
Sodium azide (CAS 26628-22-8)	Ceiling	0.3 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
		0.1 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Sodium azide (CAS 26628-22-8) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

Sodium azide (CAS 26628-22-8) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Sodium azide (CAS 26628-22-8) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Glove material: Nitrile rubber. Use gloves with breakthrough time of 480 minutes. Minimum glove thickness 0.11 mm.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Physical state Liquid.

Form Liquid.

Color Clear.

Odor Slight. None.

Melting point/freezing point Not available.

Boiling point or initial boiling point and boiling range 211.95 °F (99.97 °C) estimated

Flammability Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Flash point Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

pH 6

Kinematic viscosity Not available.

Solubility

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Vapor pressure Not available.

Density and/or relative density

Density 1.02 g/cm3 estimated

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Vapor density	Not available.
Particle characteristics	Not available.

Other information

Specific gravity	1.02 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	**Species**	**Test Results**
Sodium azide (CAS 26628-22-8)		
Acute		
Dermal		
LD50	Rabbit	18 mg/kg
Inhalation		
Dust		
LC50	Rat	0.054 - 0.52 mg/l, 4 hours
Oral		
LD50	Rat	10 mg/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.

Corrosivity

Sodium azide	Result: No skin irritation. Species: Human

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

Sensitization

Sodium azide	Local lymph node assay (LLNA), OECD Test Guideline 429 Result: Negative. Species: Mouse Organ: Skin contact

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Mutagenicity

Sodium azide	Bacterial reverse mutation assay (AMES) Result: Positive. Chromosome aberration test in vitro Result: Negative. In vitro mammalian cell gene mutation test Result: Negative. In vitro sister chromatid exchange assay in mammalian cell s Result: Negative.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

Sodium azide	Result: Negative. Species: Rat Organ: Ingestion Test Duration: 103 weeks

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Sodium azide (CAS 26628-22-8)			
Acute			
Other	EC50	Pseudokirchnerella subcapitata	0.35 mg/l, 96 hours
Aquatic			
Acute			
Crustacea	EC50	Daphnia pulex	4.2 mg/l, 48 hours
Fish	LC50	Lepomis macrochirus	0.68 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste P List: Reference

Sodium azide (CAS 26628-22-8) P105

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to IMO instruments Not established.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) One or more components of the mixture are not on the TSCA 8(b) inventory or are designated “inactive”.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Sodium azide (CAS 26628-22-8) 1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Sodium azide	26628-22-8	1000	500		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 07-31-2025

Version # 01

Disclaimer R&D Systems, Inc., a Bio-Techne Brand cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

SAFETY DATA SHEET

PREMIERE PRO ICE MELT

Revision date January 30th, 2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier	**PREMIERE PRO ICE MELT**
Recommended use	Ice Melter
Manufactured by	CP Industries, LLC 560 North 500 West Salt Lake City, UT 84116 (800) 453-4931
Emergency Contact # (24 Hour)	InfoTrac (800) 535-5053

2. HAZARDOUS IDENTIFICATION

Classification of the substance or mixture	Not a hazardous substance
Hazard Statements	None
GHS label elements, including precautionary statements	**Signal Word:** None!
Hazards not otherwise classified (HNOC)	None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance(s) Description	**CAS#**
Sodium Chloride	7647-14-5
Calcium Magnesium Acetate (CMA)	76123-46-1
Pro-Tec Plus® (Proprietary Inhibitor Package)	N/A

No ingredients are hazardous according to OSHA criteria.
No ingredients No components need to be disclosed according to applicable regulations.

4. FIRST AID MEASURES

Inhalation First Aid	Inhalation is unlikely; however, if it does occur, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen. Seek medical attention.
Skin Contact First Aid	Wash with soap and plenty of water.
Eye Contact First Aid	Flush eyes with water.
Ingestion First Aid	Never give anything by mouth to an unconscious person. Seek medical attention.

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PREMIERE PRO ICE MELT

Revision date January 30th, 2015

Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labeling.
Indication of any immediate medical attention and special treatment needed	No data available.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special Hazards from mixture	Hydrogen Chloride gas, Sodium Oxides
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary/available.
Further information	No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid breathing vapors, mist or gas.
Protective equipment and emergency procedures	For personal protection see Section 8.
Environmental precautions	Avoid large concentrations of product in a confined area.
Materials for containment and clean up	Broom and a dustpan or shovel
Methods for cleanup containment	Sweep up and keep in suitable, closed containers for disposal.
Reference to other sections	See Section 13 for disposal procedures

7. HANDLING AND STORAGE

Precautions for safe handling	Wear protective equipment when handling this product to avoid eye and skin contact. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Storage containers should be stored in a cool, dry and well-ventilated area away from strong oxidizing agents.
Specific end use(s)	Apart from the uses stated in Section 1, no other specific uses are stipulated.

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PREMIERE PRO ICE MELT

Revision date January 30th, 2015

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters	Contains no substances with occupational exposure limit values.
Personal Protective Equipment (PPE)	
Respiratory Protection	Dust mask if dust is excessive.
Skin Protection	Gloves should be worn when excessive skin contact cannot be avoided.
Eye Protection	Eye Protection is recommended in all industrial work places.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	**Form:** Solid, Crystal **Color:** Pink Crystalline
Odor	None or slight vinegar
Odor Threshold	No data available
pH	8-9 in 1% water
Melting/Freezing point	Melting point/range: 801° C (1,474° F)
Initial boiling point	1,413° C (2,575° F)
Flash point	Greater than 212.0° F (100.0° C)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Vapor pressure	1.33 hPa (1.00 mmHg) at 865° C (1, 589° F)
Vapor density	No data available
Relative density	2.1650 g/cm^3
Water solubility	soluble
Partition coefficient n-octanol/water	No data available
Auto-ignition temperature	Greater than 302.0° F (150.0° C)
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

10. STABILITY AND REACTIVITY

Reactivity	No data available
Chemical stability	No data available
Possibility of hazardous reactions	No data available
Conditions to avoid	No data available
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Other decomposition products - No data available In the event of fire: see Section 5

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PREMIERE PRO ICE MELT

Revision date January 30th, 2015

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Although no specific exposure limit has been established for this product OSHA and ACGIH have established limits for nuisance dust:	OSHA PEL/TWA Total 15 Mg/M3; Respirable 5 Mg/M3; 8-Hour TWA ACGIH TLV/TWA Total 10 Mg/M3; 8 Hour TWA
Eye Contact	Mild irritation.
Inhalation	Nuisance dust can be irritating to nose, throat and lungs
Skin Contact	Prolonged continual exposure can be irritating.
Ingestion	Ingestion may cause gastrointestinal irritation.
Chronic	No evidence of adverse effects from available datainformation.

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Lepomis macrochirus (Bluegill) - 5,840 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	NOEC - Daphnia - 1,500 mg/l - 7 d LC50 - Daphnia magna (Water flea) - 1,661 mg/l - 48 h
Bioaccumulative potential	No data available
Persistence and degradability	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required
Other adverse effects	No data available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Product	Offer surplus and non-recyclable solution to a licensed disposal company.
Contaminated packaging	Containers of this material may be hazardous when emptied since emptied containers retain product residues (vapor, liquid, and/or solid). All hazard precautions given in the data sheet must be observed. Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

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PREMIERE PRO ICE MELT

Revision date January 30th, 2015

15. REGULATORY INFORMATION

OSHA Category	Not regulated
SARA 313 Supplier Notification	Not reportable

All Ingredients are Listed on the TSCA Inventory

16. OTHER INFORMATION

Special Precautions or Other Comments: The information accumulated herein is believed to be accurate but is not warranted to be regardless of whom it originates with. Recipients are advised to confirm prior to need that the information is current, applicable, and suitable to their circumstances.

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Pro-Lube-VAC™ Vacuum Pump Oil

SECTION 1. IDENTIFICATION

PRODUCT IDENTIFIER:
Pro-Lube-VAC™ Vacuum Pump Oil
OTHER MEANS OF IDENTIFICATION:
VP68-01, VP68-05, VP68-32
RECOMMENDED USE OF THE CHEMICAL:
Please see label for instruction
RESTRICTIONS ON USE:
None known

MANUFACTURED BY: DiversiTech Corporation
3039 Premiere Parkway
Suite 600
Duluth, GA 30097
INFORMATION PHONE #: 1 800.995.2222
EMERGENCY PHONE #: 1 800.255.3924 Chem-Tel
(Chemical Emergencies)

SECTION 2. HAZARD IDENTIFICATION

CLASSIFICATION OF THE CHEMICAL:
This chemical is not considered hazardous in accordance with OSHA Hazard Communication Standard 2012.

HAZARD(S) NOT OTHERWISE CLASSIFIED:
None known

0% of the chemical consists of ingredient(s) of unknown acute toxicity.

NOTE:
Labeling elements found on this SDS may be different from labeling elements found on the label. Safety Data Sheets are regulated by OSHA (29 CFR §1910.1200) while the actual product and its label may be regulated by a different government agency. Please contact the responsible party in Section 1 if you have any questions.

SECTION 3. INFORMATION ON INGREDIENTS

INGREDIENT	CAS No.	COMPOSITION, wt%	GHS CLASSIFICATION(S)
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	60-100%	Not considered hazardous.

TRADE SECRET CLAIM:
When applicable, the specific concentration of each hazardous ingredient is considered a TRADE SECRET. Chemical names and identifiers will be listed in exact composition weight and name when not subject to trade secret exemptions.

NOTE:
This product may contain other ingredients that are not required to be disclosed on this safety data sheet or product label in accordance with 19 CFR §1910.1200. Any ingredient not listed on either the SDS or label is not considered hazardous to health and shouldn't pose a risk to the user.

Pro-Lube-VAC™ Vacuum Pump Oil

SECTION 4. FIRST AID MEASURES

GENERAL FIRST AID MEASURES:
If medical attention is required due to exposure then be sure to take product label or safety data sheet when seeking medical care.

MOST IMPORTANT SYMPTOMS:
None known.

IF INHALED:
Move person to fresh air and keep at a comfortable position for breathing. Administer artificial respiration if person is not breathing.

IF ON SKIN:
Wash with soap and water. Take off contaminated clothing and wash it before reuse.

IF IN EYES:
Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED:
Do NOT induce vomiting unless instructed to do so by a trained medical professional. Rinse mouth with water.

INDICATION OF IMMEDIATE MEDICAL ATTENTION:
Not anticipated to require immediate medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:
Water spray, carbon dioxide, sand, powder extinguisher, dry chemical.

UNSUITABLE EXTINGUISHING MEDIA:
None known.

SPECIFIC HAZARDS:
None known.

HAZARDOUS COMBUSTION PRODUCTS:
Carbon monoxide, carbon dioxide, and nitrogen oxides.

SPECIAL PROTECTIVE EQUIPMENT:
Not determined.

PRECAUTIONS FOR FIRE-FIGHTERS:
Not determined.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Remove non-emergency personnel from the area in an orderly fashion.

PROTECTIVE EQUIPMENT:
Use appropriate chemical-resistant gloves and eye protection.

EMERGENCY PROCEDURE(S):
Cover drains to prevent spill from entering waterways. Evacuate non-emergency personnel from the area. Shut off all sources of ignition.

METHODS FOR CONTAINMENT:
Cover drains and ventilate area to prevent vapor build-up.

REFERENCES:
See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

METHODS FOR CLEAN UP:
For small spills, wipe with an absorbent material. For large spills, collect with sawdust, sand, or binder before cleaning. Place in an area appropriate for disposal.

Pro-Lube-VAC™ Vacuum Pump Oil

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:
Keep away from all ignition sources. Do not smoke while handling.

STORAGE INCOMPATABILITIES:
None known

CONDITIONS FOR SAFE STORAGE:
Keep cool in a well-ventilated place away from sunlight. Ensure local and adequate ventilation. Keep container tightly sealed in its original container. Store in temperatures between 32-122°F (0-50°C). For containers use mild steel or high density polyethylene.

SECTION 8. EXPOSURE CONTROLS

INGREDIENT	CAS No.	Recommended Occupational Exposure Limit
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	5 mg/m³

GENERAL NOTE:
Practice good industrial hygiene. Wash hands after handling and use.

APPROPRIATE ENGINEERING CONTROLS:
Ensure mechanical ventilation.

EYE/FACE PROTECTION:
Eye protection is recommended. Wear goggles or another form of chemically resistant eye protection.

SKIN PROTECTION:
Wear gloves suitable for chemical protection.

RESPIRATORY PROTECTION:
No anticipated protective equipment is required.

ENVIRONMENTAL PROTECTION:
No anticipated protective equipment is required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Light yellow liquid.	ODOR:	Petroleum-like.
pH:	Not determined.	ODOR THRESHOLD:	Not determined.
MELTING POINT:	Not determined.	BOILING POINT:	280°C
FLASHPOINT:	200°C	EVAPORATION RATE:	Not determined.
FLAMMABILITY:	Not flammable but will burn.	UPPER EXPLOSIVE %:	Not determined.
VAPOR PRESSURE:	Not determined.	LOWER EXPLOSIVE %:	Not determined.
VAPOR DENSITY:	Not determined.	RELATIVE DENSITY:	Not determined.
SOLUBILITY:	Not determined.	PARTITION COEFFICIENT:	Not determined.
AUTO-IGNITION:	Not determined.	DECOMPOSITION TEMP:	Not determined.
VISCOSITY:	Not determined.		

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY:
Not anticipated to be reactive.

CHEMICAL STABILITY:
Chemical is anticipated to be stable in normal storage conditions.

HAZARDOUS REACTIONS:
None known.

CONDITIONS TO AVOID:
Heat, sources of ignition, direct sunlight, etc.

INCOMPATIBLE MATERIALS:
Oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS:
None known.

Pro-Lube-VAC™ Vacuum Pump Oil

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY ESTIMATES:
Oral – Contains no ingredient(s) considered toxic.
Dermal – Contains no ingredient(s) considered toxic.
Inhalation – Contains no ingredient(s) considered toxic.

SENSITIZATION:
Respiratory: Contains no ingredient(s) applicable to this category.
Skin: Contains no ingredient(s) applicable to this category.

REPRODUCTIVE TOXICITY:
Contains no ingredient(s) applicable to this category.

ASPIRATION HAZARD:
Contains no ingredient(s) applicable to this category.

SYMPTOMS RELATED TO CHARACTERISTICS:
Not determined.

NATIONAL TOXICOLOGY PROGRAM LISTING:
No ingredients listed.

SKIN CORROSION/IRRITATION:
Contains no ingredient(s) applicable to this category.

EYE DAMAGE/IRRITATION:
Contains no ingredient(s) applicable to this category.

GERM CELL MUTAGENICITY:
Contains no ingredient(s) applicable to this category.

CARCINOGENICITY:
Contains no ingredient(s) applicable to this category.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:
Contains no ingredient(s) applicable to this category.

SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:
Contains no ingredient(s) applicable to this category.

DELAYED AND IMMEDIATE EFFECT FROM SHORT- AND LONG-TERM EXPOSURE::
Not determined.

INTERNATIONAL AGENCY FOR REACH ON CANCER LISTING:
No ingredients listed.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY:
Algae – Contains no ingredient(s) considered toxic.
Fish – Contains no ingredient(s) considered toxic.
Crustacea – Contains no ingredient(s) considered toxic.

MOBILITY IN SOIL:
Not determined.

PERSISTENCE AND DEGRADEABILITY:
Not determined.

BIOACCUMULATIVE POTENTIAL:
Not determined.

OTHER ADVERSE EFFECTS:
None known.

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL OF EMPTY CONTAINERS:
Please recycle container with a licensed recycling company.

DISPOSAL OF FULL OR PARTIALLY FULL CONTAINERS:
Dispose in accordance with all local regulations. Contact a licensed waste management company for questions on disposal procedures.

Pro-Lube-VAC™ Vacuum Pump Oil

SECTION 14. TRANSPORT INFORMATION

HAZARD PLACARD: Not a regulated chemical.
UN NUMBER: -
LTD QTY: -

UN PROPER SHIPPING NAME: Not regulated.
HAZARD CLASS: Not regulated.
PACKAGING GROUP: Not regulated.
ENVIRONMENTAL HAZARD: No.
TRANSPORT IN BULK: Not determined.
SPECIAL PRECAUTIONS: Do not ship with excessive weight on top. Keep in original containers.

SECTION 15. REGULATORY INFORMATION

SARA:
311 – No applicable ingredient(s).
312 – No applicable ingredient(s).
313 – No applicable ingredient(s).

RIGHT-TO-KNOW:
Distillates (petroleum), solvent-dewaxed heavy parafinnic.

TSCA INVENTORY LIST:
Each ingredient is on the TSCA inventory list as ACTIVE.

CALIFORNIA:
Prop 65: No ingredient(s) listed.
ARB Designation: Single purpose cleaner.
VOC Limit: Not determined

HMIS®III: (higher numbers indicate higher risk)
Health,1
Flammability, 1
Physical Hazard, 0

NFPA(higher numbers indicate higher risk)
Health, 1
Flammability, 1
Instability, 0

SECTION 16. OTHER INFORMATION

REVISION: 2
REVISION DATE: October 18, 2020

REVISION PURPOSE:
Revision based on the new data in relation to formula.

GENERAL DISCLAIMER:
All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publications of use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

SAFETY DATA SHEET

1. Identification

Product identifier **Propane**

Other means of identification

SDS number WC002

Product code UN1075

Recommended use Portable fuel.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 300 E. Breed St., Chilton, WI 5301
United States

Contact person Ann Stiefvater

E-mail address Ann.Stiefvater@worthingtonindustries.com

Telephone number 1-920-849-1740

Emergency telephone number 1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas

Health hazards Not classified.

OSHA defined hazards Simple asphyxiant

Label elements



Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	87.5-100
Propylene	115-07-1	0-10

Ethane	74-84-0	0-7
Butane	106-97-8	0-2.5

Additives

Chemical name	CAS number	%
Ethyl Mercaptan	75-08-1	<0.005

Composition comments Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin contact Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.

Eye contact Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Most important symptoms/effects, acute and delayed Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.

Indication of immediate medical attention and special treatment needed Exposure may aggravate pre-existing respiratory disorders. Provide general supportive measures and treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical powder. Carbon dioxide (CO2). Water fog. Foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Extremely flammable gas. Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out.

General fire hazards Extremely flammable gas. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. In the event of a leak evacuate all personnel until ventilation can restore oxygen concentrations to safe levels. Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Wear appropriate personal protective equipment (See Section 8).

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.

Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. All equipment used when handling the product must be grounded. Do not breathe gas. Avoid prolonged exposure. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store at temperatures not exceeding 49°C/120°F. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Protect cylinders from damage. Stored containers should be periodically checked for general condition and leakage. Store in original tightly closed container. Keep container tightly closed. Store in a well-ventilated place. Use care in handling/storage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	25 mg/m3 10 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Propylene (CAS 115-07-1)	TWA	500 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	1.3 mg/m3 0.5 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide adequate ventilation and minimize the risk of inhalation of gas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear approved safety glasses or goggles.

Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Neoprene or nitrile gloves are recommended.
Skin protection	
Other	Wear protective clothing appropriate for the risk of exposure.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance	Colorless gas.
Physical state	Gas (Liquefied).
Form	Compressed liquefied gas.
Color	Colorless.
Odor	Rotten egg.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not available.
Relative density	0.504 (liquid) 1.5 (vapor) (air=1) @ 15°C / 60°F
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Explosive properties	Not explosive.
Molecular weight	45 g/mol
Oxidizing properties	Not oxidizing.
Percent volatile	100 %

10. Stability and reactivity

Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur. May form explosive mixture with air.

Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens. Nitrates.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	1355 mg/l
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Propylene (CAS 115-07-1) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Further information	Exposure over a long period of time may cause central nervous system effects.

12. Ecological information

Ecotoxicity The product is not expected to be hazardous to the environment.

Persistence and degradability The product is readily biodegradable.

Bioaccumulative potential The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Propane	1.77
Propylene (CAS 115-07-1)	1.77

Mobility in soil Not relevant, due to the form of the product.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.

Local disposal regulations Dispose of in accordance with local regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 °F
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose in accordance with all applicable regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1075
UN proper shipping name	Petroleum Gases, Liquified
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	19, T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315

IATA

UN number	UN1075
UN proper shipping name	Petroleum Gases, Liquified
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1075
UN proper shipping name	Petroleum Gases, Liquified
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No

EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
General information	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butane (CAS 106-97-8)	LISTED
Ethyl Mercaptan (CAS 75-08-1)	LISTED
Propane (CAS 74-98-6)	LISTED
Propylene (CAS 115-07-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	0-10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. New Jersey Worker and Community Right-to-Know Act

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-May-2014

Revision date 09-August-2016

Version # 02

Further information The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

HMIS® ratings
Health: 1
Flammability: 4
Physical hazard: 1

NFPA ratings



List of abbreviations
STEL: Short term exposure limit.
TWA: Time weighted average.
PEL: Permissible Exposure Limit.
LC50: Lethal Concentration, 50%.

References
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer	All information in this Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.
This SDS contains revisions in the following section(s):	1 - 16

AIKEN CHEMICAL COMPANY, INC.

Safety Data Sheet
Aluminum Brightener

SECTION 1: Identification

1.1 Product identifier

Product name	Aluminum Brightener
Product number	4115PS, 4120P, 4125P, 4140
Brand	Purple Power

1.3 Recommended use of the chemical and restrictions on use

Cleaning cast aluminum, stainless steel, copper, brass, and fiber glass.
Do not use on sealed, painted, or polished surfaces.

1.4 Supplier's details

Name	Aiken Chemical Company, Inc.
Address	P.O. Box 27147 Greenville, SC 29616 USA
Telephone	864-968-1250
Fax	864-968-1252
Email	donnie@clean-rite.com

1.5 Emergency phone number(s) 1-800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

- Eye damage/irritation (C.4.5), Cat. 1
- Acute toxicity, inhalation (C.4.3), Cat. 2
- Carcinogenicity (C.4.9), Cat. 1A
- Skin corrosion/irritation (C.4.4), Cat. 1A
- Specific target organ toxicity (repeated exposure) (C.4.12), Cat. 2

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word **Danger**

Hazard statement(s)

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H350	May cause cancer [Inhalation]
H373	May cause damage to organs [kidney, liver lungs and bone] through prolonged or repeated exposure [Eyes, Skin, Inhalation, Ingestion]

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280	Wear eye protection/face protection.
P284	In case of inadequate ventilation, wear respiratory protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor/if not breathing, not feeling well, or if rash developes.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment : Treat symptomatically.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with all local, state, and federal regulations

Statement regarding ingredients of unknown toxicity
Approximately 46% of the Acid Solution contains ingredients not listed on the SDS and are of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Acid Solution

Concentration	<= 35 % (weight)

- Acute toxicity, inhalation (C.4.3), Cat. 2
- Skin corrosion/irritation (C.4.4), Cat. 1A
- Eye damage/irritation (C.4.5), Cat. 1
- Hazardous to the aquatic environment, short-term (acute) (chapter 4.1), Cat. 3
- Hazardous to the aquatic environment, long-term (chronic) (chapter 4.1), Cat. 3
- Carcinogenicity (C.4.9), Cat. 1A
- Specific target organ toxicity (repeated exposure) (C.4.12), Cat. 2
- Corrosive to metals (C.4.29), Cat. 1

H290	May be corrosive to metals
H300+H330	Fatal if swallowed or if inhaled
H314	Causes severe skin burns and eye damage
H330	Fatal if inhaled
H350	May cause cancer [route]
H371	May cause damage to organs [organs, route]

2. Water

Concentration	<= 65 % (weight)
EC no.	215-185-5
CAS no.	7732-18-5

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled	Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Consult a physician. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

In case of skin contact	Remove contaminated clothing, jewelry and shoes immediately. Flush affected area with large amounts of water, then use soap or mild detergent and large amounts of water for 15-20 minutes to cleanse area. Get medical attention immediately.
In case of eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get immediate medical attention.
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, give large amounts of water and contact a physician immediately.

4.2 Most important symptoms/effects, acute and delayed
Effects of Overexposure: May cause severe burns to skin or eyes. Inhalation of mist from hot acid may inure lungs. Ingestion may cause severe injury or death.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
If any symptoms listed above become present and or persist, contact a physician immediately.
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use extinguishing media appropriate for surrounding fire.

5.2 Specific hazards arising from the chemical
Contact with metals may produce Hydrogen gas.

5.3 Special protective actions for fire-fighters
Fire fighters should enter area only if they are protected from all contact with the material. Full protective clothing, including self-contained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms, and waist, should be worn. No skin surfaces should be exposed.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Dam spills if possible; then neutralize spill with soda ash or lime. Flush with water to a chemical sewer or disposal system. This neutralization procedure should be conducted with good ventilation. Wear chemical protective clothing, gloves and goggles.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
In order to be completely informed on the latest regulations for your area, please contact the local authorities.

Reference to other sections
Use proper personal protective equipment as indicated in Section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Specific end use(s)
Cleans and brightens cast aluminum surfaces.
Cleans stainless steel.
Can be used to clean Copper and Brass.
May be used on fiberglass.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Phosphoric Acid (CAS: 7664-38-2)
PEL (Inhalation): 1 mg/m3 (OSHA)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 8 hr (Inhalation): 1 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1 www.osha.gov

STEL (Inhalation): 3 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 10 hr (Inhalation): 1 mg/m3 (NIOSH)
OSHA Annotated Table Z-1 www.osha.gov

STEL (Inhalation): 3 mg/m3 (NIOSH)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 8 hr (Inhalation): 1 mg/m3 (ACGIH)
OSHA Annotated Table Z-1 www.osha.gov

STEL (Inhalation): 3 mg/m3 (ACGIH)
OSHA Annotated Table Z-1 www.osha.gov

2. Sulfuric Acid (CAS: 7664-93-9)
PEL (Inhalation): 1 mg/m3 (OSHA)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 8 hr (Inhalation): 0.1 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1 www.osha.gov

STEL (Inhalation): 3 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 10 hr (Inhalation): 1 mg/m3 (NIOSH)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 8 hr (Inhalation): 0.2 mg/m3 (ACGIH)
OSHA Annotated Table Z-1 www.osha.gov

3. Ammonium Bifluoride (CAS: 1341-49-7)
Limit val - 8 hr (Inhalation): 205 mg (f) /m3 (ACGIH)
OSHA Annotated Table Z-1 www.osha.gov

4. Ethylene Glycol Monobutyl Ether (CAS: 111-76-2)
PEL (Inhalation): 240 mg /m3 (OSHA)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 8 hr (Inhalation): 20 ppm (Cal/OSHA)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 10 hr (Inhalation): 5 ppm (NIOSH)
OSHA Annotated Table Z-1 www.osha.gov

Limit val - 8 hr (Inhalation): 20 ppm (ACGIH)
OSHA Annotated Table Z-1 www.osha.gov

8.2 Appropriate engineering controls
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Protective Gloves: Wear appropriate protective gloves to prevent skin exposure.
Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Body protection
Chemically resistant apron or lab coat

Environmental exposure controls
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Clear/Colorless
Odor	Slight acidic odor
Odor threshold	No data available.
pH	3.0 – 3.5
Melting point/freezing point	No data available.
Initial boiling point and boiling range	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	Non flammable
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	1.0588
Solubility(ies)	Complete in water
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

Other safety information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Low reactivity with metals.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Low

10.4 Conditions to avoid
Extremely high temperatures

10.5 Incompatible materials
Strong oxidizing agents, Reacts with most common metals to produce hydrogen gas. Is corrosive to many materials including leather, rubber, and many organics. Acids, Bases.

10.6 Hazardous decomposition products
Possibility of decomposition if heated and in contact with sources of ignition. Releases of toxic gases and vapors (Sulfur oxides (SO2,SO3)).

Heat above 350C will result in decomposition, releasing hydrogen fluoride and ammonia gas. Contact with strong acids will cause hydrogen fluoride to be released; contact with strong alkalis will cause ammonia gas to be released.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Sulfuric Acid:
Oral rat LD50: 2140 mg/kg
Inhalation rat LC50: 510 mg/m3/2h
Standard Draize, eye rabbit, 250 ug (severe).

Ammonium Fluoride
Acute toxicity LD50 : 60 - 130 mg/kg - Rat
ATE (inhalation, gaseous) of mixture: 200 ppmv

Skin corrosion/irritation
Skin corrosion/irritation C.4.4), Cat. 1

Serious eye damage/irritation
Eye Damage/irritation (C.4.5), Cat.1

Respiratory or skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenicity
Strong inorganic acid mists containing sulfuric acid can cause cancer. Risk of cancer depends on duration and level of exposure. Sulfuric acid (Proven for human) by IARC, and (Proven) by OSHA, Classified 2 (suspected for human) by ACGIH.

Reproductive toxicity
No data available.

STOT-single exposure
No data available.

STOT-repeated exposure
H373: May cause damage to organs [kidney, liver lungs and bone] through prolonged or repeated exposure [Eyes, Skin, Inhalation, Ingestion]

Aspiration hazard
No data available.

Additional information
Immediate effects: Severe irritation or burns to skin, eyes and respiratory system
Long term exposure to concentrated vapors may cause erosion of the teeth. Long term exposure seldom due to corrosive properties of the acid.

SECTION 12: Ecological information

Toxicity
Acid Solution:
Fish, Lepomis macrochirus, Sulfuric Acid,LC50-48 h-49 mg/L
Daphnia Magna, Sulfuric Acid-EC50,48 h-60-70 mg/L

Persistence and degradability
Not Available

Bioaccumulative potential
Unlikely

Mobility in soil
No data avaiilable

Results of PBT and vPvB assessment
No data avaiilable

Other adverse effects
Sulfuric Acid:
When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.
Sulfuric Acid:
LC50 Flounder 100 to 330 mg/l/48 hr aerated water/Conditions of bio-assay not specified; LC50 Shrimp 80 to 90 mg/l/48 hr. aerated water /Conditions of bio assay not specified; LC50 Prawn 42.5 ppm/48 hr. salt water /Conditions of bio assay not specified.

SECTION 13: Disposal considerations

Disposal of the product
Dispose of in accordance with local, state and federal regulations.
Disposal of contaminated packaging
Dispose of in accordance with local, state and federal regulations.

SECTION 14: Transport information

DOT (US)
UN Number: UN1760
Class: 8
Packing Group: II
Proper Shipping Name: CORROSIVE LIQUID N.O.S. (PHOSPHORIC ACID, SULFURIC ACID, AMMONIUM BIFLUORIDE)
ERG: 154
Environmental Hazards (e.g. Marine Pollutant): Yes

IMDG
UN Number: UN1760
Class: 8
Packing Group: II
Proper Shipping Name: CORROSIVE LIQUID N.O.S. (PHOSPHORIC ACID, SULFURIC ACID, AMMONIUM BIFLUORIDE)
ERG: 154
Environmental Hazards (e.g. Marine Pollutant): Yes

IATA
UN Number: UN1760
Class: 8
Packing Group: II
Proper Shipping Name: CORROSIVE LIQUID N.O.S. (PHOSPHORIC ACID, SULFURIC ACID, AMMONIUM BIFLUORIDE)
ERG: 154
Environmental Hazards (e.g. Marine Pollutant): Yes

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

CERCLA
Sulfuric Acid-RQ=1000 lbs.

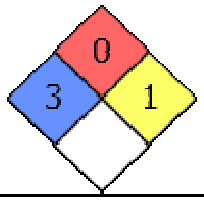
SARA Hazard Classification
SARA Tittle III Section 311 Categories: Immediate (Acute) Health Effects: Yes, Delayed (Chronic) Health Effects: Yes, Fire Hazard: No, Sudden Release of Pressure Hazard: No, Reactivity Hazard: No
* THIS SUBSTANCE IS A CHEMICAL SUBJECT TO SARA TITLE III, SECTION 313 REPORTING REQUIREMENTS. Subject to reporting levels established by SARA Title III, Section 302

15.2 Chemical Safety Assessment
To our knowledge, No chemical Safety Assessment has been carried out on this product.

HMIS Rating

Aluminum Brightener	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	D

NFPA Rating



SECTION 16: Other information

No RoHS chemicals are contained in this product. REACH SVHC are contained in this product as Nonyl Phenol

16.1 Further information/disclaimer

The information is based on our knowledge to date but does not constitute an assurance of product properties and does not imply a legal contractual relationship. Safety Data Sheet information is based on the Safety Data Sheet provided by the chemical manufacturer.

16.2 Preparation information

Donnie Arcaro
Aiken Chemical Company, Inc.
P.O. Box 27147, Greenville, SC 29616
Local: 864-968-1250
Toll Free: 800-828-1860
Fax: 864-968-1252
Donnie@clean-rite.com

Safety Data Sheet

Issue Date: 04-Mar-2010 **Revision Date:** 12-Jan-2016 **Version** 3

1. IDENTIFICATION

Product Identifier

Product Name **Quali-Pro Chlorothalonil 720 SFT**

Other means of identification

SDS # ADAMA-053A

Registration Number(s) EPA Reg. No. 66222-154

Recommended use of the chemical and restrictions on use

Recommended Use EPA registered pesticide.

Details of the supplier of the safety data sheet

Manufacturer Address

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)
3120 Highwoods Blvd., Suite 100
Raleigh, NC 27604
1-919-256-9300

Emergency Telephone Number

Emergency Telephone (24 hr) For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact PROSAR:
1-877-250-9291

2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance Off-white liquid **Physical State** Liquid **Odor** Slight

Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin

Signal Word

Danger

Hazard Statements
Harmful if inhaled
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing cancer
May cause respiratory irritation



Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection

Precautionary Statements - Response
If exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a poison center or doctor/physician if you feel unwell

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Chlorothalonil	1897-45-6	52.38-55.62
Proprietary Solvent	Proprietary	<10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. If exposed or concerned: Get medical advice/attention.

Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Call a physician or poison control center immediately.
Ingestion	Do not induce vomiting, unless directed by medical personnel. Never give anything by mouth to an unconscious person. If conscious, give 1 glass of water to dilute.

Most important symptoms and effects

Symptoms	Direct contact with skin can cause irritation or redness. Causes serious eye damage. May cause respiratory irritation. Vapors may cause irritation to nose, throat, and respiratory tract. High vapor concentrations may cause central nervous system depression which can lead to dizziness, weakness and headache.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically. Persons having temporary irritation may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide, or dry foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Product is not flammable.

Hazardous Combustion Products During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Hydrogen chloride.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Environmental Precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Vacuum or sweep up material and place in a disposal container. Wash area with soap and water. Pick up wash liquid with inert absorbent and place in a chemical waste container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Avoid spilling. Avoid breathing vapors or mists. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Open containers cautiously. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink, smoke, or apply cosmetics while handling this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Keep/store only in original container. Store locked up. Protect from excessive heat. Keep away from food, drink and animal feeding stuffs. Do not use food or drink containers for mixing or storage. Store at ambient conditions.

Incompatible Materials Metals such as aluminum, tin, and zinc. Alkaline conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary Solvent	Ceiling: 100 mg/m^3 aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m^3	-

Appropriate engineering controls

Engineering Controls Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles). Goggles are recommended.

Skin and Body Protection Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear long-sleeved shirt, long pants, and shoes plus socks. Use chemical resistant gloves, such as P.V.C., butyl-rubber, nitrile-rubber, or neoprene.

Respiratory Protection NIOSH-approved respirator or mask in the absence of adequate ventilation.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Off-white liquid	**Odor**	Slight
Color	Off-white	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	7.7	(1% dispersion)
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not applicable	
Evaporation Rate	Not applicable	
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not applicable	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	807 cps	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
Density	1.32 g/ml	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children. Store away from foodstuffs, animal feed, and incompatibles. See Sec. 7 Handling & Storage. Contact with incompatible materials.

Incompatible Materials
Metals such as aluminum, tin, and zinc. Alkaline conditions.

Hazardous Decomposition Products
May emit toxic fumes under fire conditions. Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye irritation.

Skin Contact May be harmful in contact with skin.

Inhalation Harmful if inhaled.

Ingestion Do not ingest.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Chlorothalonil 1897-45-6	= 10 g/kg (Rat)	> 2500 mg/kg (Rat) > 2000 mg/kg (Rabbit)	= 0.217 mg/L (Rat) 4 h = 0.31 mg/L (Rat) 1 h
Proprietary Solvent	= 4000 mg/kg (Rat)	= 9530 µL/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Chlorothalonil 1897-45-6		Group 2B		X

Legend

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

STOT - single exposure May cause respiratory irritation.

Product Information (Numerical measures of toxicity)

Acute Oral LD50 (Rat): >5,000 mg/kg
Acute Dermal LD50 (Rabbit): >5,000mg/kg
Acute Inhalation LC50 (Rat): >2.02 mg/L (4-hr)
Eye Irritation: Moderately irritating.
Dermal Irritation: Non-irritating.
Dermal Sensitization: Not a skin sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects. This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate. This chemical is known to leach through soil into groundwater under certain conditions as a result of labeled use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Chlorothalonil 1897-45-6	0.57: 72 h Desmodesmus subspicatus mg/L EC50 0.0068: 72 h Pseudokirchneriella subcapitata mg/L EC50 static	0.012: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.0076: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.0221 - 0.032: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.045 - 0.057: 96 h Lepomis macrochirus mg/L LC50 static		0.0342 - 0.143: 48 h Daphnia magna mg/L EC50 Static
Proprietary Solvent	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	46300: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Chlorothalonil 1897-45-6	2.9

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT Package size less than 119 Gallons (450 Lt.): Not regulated

Package size larger than 119 Gallons (450 Lt.):

UN/ID No	UN3082
Proper Shipping Name	Environmentally hazardous substance, n.o.s., liquid (Chlorothalonil)
Hazard Class	9
Packing Group	III
	Marine pollutant

IATA

UN/ID No	UN3082
Proper Shipping Name	Environmentally hazardous substance, n.o.s., liquid (Chlorothalonil)
Hazard Class	6.1
Packing Group	II
Description	Marine Pollutant

IMDG

UN/ID No	UN3082
Proper Shipping Name	Environmentally hazardous substance, n.o.s., liquid (Chlorothalonil)
Hazard Class	9
Packing Group	III
Marine Pollutant	Marine Pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA All ingredients are listed or exempt from listing on Chemical Substance Inventory

Legend:

***TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Proprietary Solvent	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Chlorothalonil - 1897-45-6	1897-45-6	52.38-55.62	0.1
Proprietary Solvent	Proprietary	<1	1.0

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Chlorothalonil - 1897-45-6	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Chlorothalonil 1897-45-6	X	X	X
Proprietary Solvent	X	X	X

EPA Pesticide Registration Number 66222-154

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Signal Word: Warning

Causes eye irritation. May cause skin irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get into eyes. Avoid prolonged contact with skin. Avoid breathing spray mist. Do not take internally.

Note to user: This product may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation, and redness or rash on exposed skin areas. Persons having allergic reactions should contact a physician

Difference between SDS and EPA pesticide label

	EPA	OSHA
Signal Word	Warning	Danger
Acute toxicity - Dermal	N/A	May be harmful in contact with skin
Acute toxicity - Inhalation (Dusts/Mists)	N/A	Harmful if inhaled
Skin corrosion/irritation	May cause skin irritation	N/A
Serious eye damage/eye irritation	Causes eye irritation	Causes serious eye irritation
Skin sensitization	Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals	N/A
Carcinogenicity	N/A	Suspected of causing cancer
STOT - single exposure	N/A	May cause respiratory irritation

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

Issue Date: 04-Mar-2010
Revision Date: 12-Jan-2016
Revision Note: Revision 2: Updated format from 30-Sep-2014
Revision 3: Updated format from 27-Oct-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

QUIKSTEEL CARDED 2 OZ.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 04/03/2017 Supersedes:10/29/2015 Version: 1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Trade name : QUIKSTEEL CARDED 2 OZ.

Product code : 16002TRI

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Multiple Use Epoxy Putty

1.3. Details of the supplier of the safety data sheet

Technical Chemical Company
P.O. BOX 139
Cleburne, Texas 76033
T 817-645-6088

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2 H315
Eye Irrit. 2 H319
Skin Sens. 1 H317
Carc. 1A H350

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H350 - May cause cancer

Precautionary statements (GHS-US) : P201 - Obtain special instructions
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust,fume,gas,mist,vapor spray
P264 - Wash affected areas thoroughly after handling
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear protective gloves,protective clothing,eye protection,face protection
P302+P352 - If on skin: Wash with plenty of soap and water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention
P321 - Specific treatment: See section 4.1 on SDS
P332+P313 - If skin irritation occurs: Get medical advice/attention
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

No data available

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Talc	(CAS No) 14807-96-6	39.954 - 66.59	Not classified
2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer	(CAS No) 25085-99-8	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
GMP-800	(CAS No) Trade Secret	10 - 30	Not classified
Dolomite	(CAS No) 16389-88-1	3.3295 - 6.659	Not classified
Magnesium Carbonate	(CAS No) 546-93-0	0.6659 - 3.3295	Not classified
Quartz	(CAS No) 14808-60-7	0.6659 - 3.3295	Acute Tox. 4 (Oral), H302 Carc. 1A, H350
2,4,6-Tris (Dimethylaminomethyl) Phenol	(CAS No) 90-72-2	> 1.5675	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315
Electronic Grade Resin	(CAS No) 28064-14-4	1 - 5	Not classified
Iron (III) Oxide	(CAS No) 1309-37-1	1 - 5	Not classified
Epoxy White	(CAS No) 025085-99-8	< 1	Not classified
DMP-30		< 0.0825	Not classified
Carbon Black	(CAS No) 1333-86-4	< 0.0389702	Carc. 2, H351
Silicon, Crystalline	(CAS No) 7440-21-3	< 0.0186	Not classified
Chromium	(CAS No) 7440-47-3	< 0.0124	Not classified
Manganese	(CAS No) 7439-96-5	< 0.01178	Not classified

The exact percentage is a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : If you feel unwell, seek medical advice.

Symptoms/injuries after inhalation : May cause cancer by inhalation.

Symptoms/injuries after skin contact : May cause slight irritation.

Symptoms/injuries after eye contact : May cause slight eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed and enters airways.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources.

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Keep in tubing if not used.

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions . Do not handle until all safety precautions have been read and understood.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer (25085-99-8)		
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³
DNEL	DNEL	<

Carbon Black (1333-86-4)		
USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (Carbon black; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)

Iron (III) Oxide (1309-37-1)		
USA ACGIH	ACGIH TWA (mg/m³)	5 mg/m³ (Iron oxide (Fe2O3); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)

Manganese (7439-96-5)		
USA ACGIH	ACGIH TWA (mg/m³)	0.1 mg/m³ (Manganese, elemental; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)

Chromium (7440-47-3)		
USA ACGIH	ACGIH TWA (mg/m³)	0.5 mg/m³ (Chromium, metal; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

Talc (14807-96-6)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³ (Talc (containing no asbestos fibers); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica; Talc (containing asbestos fibers); 0.1 fibers/cm³; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fibers: length > 5 µm; aspect ratio ≥ 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination)
USA OSHA	OSHA PEL (TWA) (mg/m³)	2 mg/m³

Dolomite (16389-88-1)		
USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (Particulates (insoluble or poorly soluble)(NOS); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)

Magnesium Carbonate (546-93-0)		
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	0.1 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Local exhaust venilation, vent hoods . Ensure good ventilation of the work station.

Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.



Materials for protective clothing : GIVE EXCELLENT RESISTANCE:

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask.

Environmental exposure controls : Avoid release to the environment.

Consumer exposure controls : Avoid contact during pregnancy/while nursing.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Cylindrical Putty Stick.

Color : Gray.

Odor : Pungent.

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : > 100 °C

Flash point : > 100 °C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : No data available

Relative vapor density at 20 °C : No data available

Relative density : 1.7

Solubility : No data available

Log Pow : No data available

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Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosion limits	:	No data available

9.2. Other information

VOC content : < 1 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

GMP-800 (Trade Secret)	
LD50 oral rat	2.6 g/kg
LD50 dermal rabbit	> 10.2 g/kg

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer (25085-99-8)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	20000 mg/kg (Rabbit)

Electronic Grade Resin (28064-14-4)	
LD50 oral rat	4000 mg/kg

2,4,6-Tris (Dimethylaminomethyl) Phenol (90-72-2)	
LD50 oral rat	1200 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 2169 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study; Other; >1 ml/kg; Rat; Experimental value)

Carbon Black (1333-86-4)	
LD50 oral rat	> 8000 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit)

Iron (III) Oxide (1309-37-1)	
LD50 oral rat	> 5000 mg/kg (Rat; Literature study)

Manganese (7439-96-5)	
LD50 oral rat	9000 mg/kg (Rat)

Silicon, Crystalline (7440-21-3)	
LD50 oral rat	> 3160 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; >5000 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Weight of evidence)

Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg

Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitization	:	May cause an allergic skin reaction.
Germ cell mutagenicity	:	Not classified

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Carcinogenicity : May cause cancer.

Carbon Black (1333-86-4)	
IARC group	2B

Iron (III) Oxide (1309-37-1)	
IARC group	3

Chromium (7440-47-3)	
IARC group	3

Talc (14807-96-6)	
IARC group	3

Quartz (14808-60-7)	
IARC group	1

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : May cause cancer by inhalation.

Symptoms/injuries after skin contact : May cause slight irritation.

Symptoms/injuries after eye contact : May cause slight eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

GMP-800 (Trade Secret)	
LC50 fish 1	> 100 mg/l

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer (25085-99-8)	
LC50 fish 1	3.1 mg/l 96 Hours Freshwater Fish (Pimephales promelas)
EC50 Daphnia 1	1.4 mg/l 48 Hours

2,4,6-Tris (Dimethylaminomethyl) Phenol (90-72-2)	
EC50 Daphnia 2	41.3 mg/l (LC50; 48 h; Daphnia magna)
Threshold limit algae 2	84 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Experimental value)

Carbon Black (1333-86-4)	
LC50 fish 1	> 1000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio)
EC50 Daphnia 1	> 5600 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 24 h; Daphnia magna; Static system; Fresh water)
LC50 fish 2	1000 mg/l (LC0; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio; Semi-static system; Fresh water; Experimental value)
Threshold limit algae 1	> 10000 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Experimental value)

Iron (III) Oxide (1309-37-1)	
LC50 fish 1	> 1000 mg/l (LC50; 48 h)

Talc (14807-96-6)	
LC50 fish 1	> 100 g/l (LC50; 24 h; Brachydanio rerio)

12.2. Persistence and degradability

QUIKSTEEL CARDED 2 OZ.	
Persistence and degradability	Not established.

GMP-800 (Trade Secret)	
Persistence and degradability	Not established.

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer (25085-99-8)	
Persistence and degradability	Not established.

Electronic Grade Resin (28064-14-4)	
Persistence and degradability	Biodegradability in soil: no data available. Not established.

Epoxy White (025085-99-8)	
Persistence and degradability	Not established.

2,4,6-Tris (Dimethylaminomethyl) Phenol (90-72-2)	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil. Low potential for adsorption in soil.

DMP-30	
Persistence and degradability	Biodegradability in soil: no data available.

Carbon Black (1333-86-4)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil. Not established.
ThOD	Not applicable

Iron (III) Oxide (1309-37-1)	
Persistence and degradability	Biodegradability: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Manganese (7439-96-5)	
Persistence and degradability	Biodegradability: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Silicon, Crystalline (7440-21-3)	
Persistence and degradability	Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Chromium (7440-47-3)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Talc (14807-96-6)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Dolomite (16389-88-1)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Magnesium Carbonate (546-93-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Quartz (14808-60-7)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

QUIKSTEEL CARDED 2 OZ.	
Bioaccumulative potential	Not established.

GMP-800 (Trade Secret)	
Bioaccumulative potential	Not established.

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer (25085-99-8)	
Bioaccumulative potential	Not established.

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Electronic Grade Resin (28064-14-4)	
Bioaccumulative potential	No bioaccumulation data available. Not established.

Epoxy White (025085-99-8)	
Bioaccumulative potential	Not established.

2,4,6-Tris (Dimethylaminomethyl) Phenol (90-72-2)	
Log Pow	0.77 (Literature; 0.219; Experimental value; Equivalent or similar to OECD 107; 21.5 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

DMP-30	
Bioaccumulative potential	No bioaccumulation data available.

Carbon Black (1333-86-4)	
Bioaccumulative potential	Not bioaccumulative. Not established.

Iron (III) Oxide (1309-37-1)	
Bioaccumulative potential	No bioaccumulation data available.

Manganese (7439-96-5)	
BCF fish 1	81 (BCF)
BCF other aquatic organisms 1	300000 (BCF)
BCF other aquatic organisms 2	125000 (BCF)
Bioaccumulative potential	Not established.

Silicon, Crystalline (7440-21-3)	
Bioaccumulative potential	Not established.

Chromium (7440-47-3)	
BCF fish 1	0.0048 (BCF)
BCF other aquatic organisms 1	0.443 (BCF)
Bioaccumulative potential	Not bioaccumulative.

Talc (14807-96-6)	
Bioaccumulative potential	Not established.

Dolomite (16389-88-1)	
Bioaccumulative potential	No bioaccumulation data available.

Magnesium Carbonate (546-93-0)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

2,4,6-Tris (Dimethylaminomethyl) Phenol (90-72-2)	
Log Koc	Koc,SRC PCKOCWIN v2.0; 20.98; QSAR; log Koc; 1.32; Calculated value

Carbon Black (1333-86-4)	
Ecology - soil	Not toxic to plants. Not toxic to animals.

Silicon, Crystalline (7440-21-3)	
Surface tension	0.74 N/m (1410 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations. . Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): Not Regulated,

ICAO/IATA (air): Not Regulated,

IMO/IMDG (water): Not Regulated,

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not Regulated

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14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

QUIKSTEEL CARDED 2 OZ.	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

GMP-800 (Trade Secret)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer **(25085-99-8)**	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Electronic Grade Resin (28064-14-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Epoxy White (025085-99-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon Black (1333-86-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

GMP-800 (Trade Secret)
Listed on the Canadian DSL (Domestic Substances List)

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer **(25085-99-8)**	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Electronic Grade Resin (28064-14-4)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Epoxy White (025085-99-8)

Carbon Black (1333-86-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

GMP-800 (Trade Secret)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer **(25085-99-8)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Electronic Grade Resin (28064-14-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Epoxy White (025085-99-8)

Carbon Black (1333-86-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

R43
R52/53

Full text of R-phrases: see section 16

15.2.2. National regulations

GMP-800 (Trade Secret)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Korean ECL (Existing Chemicals List)

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer **(25085-99-8)**

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on NZIoC (New Zealand Inventory of Chemicals)

Electronic Grade Resin (28064-14-4)

Listed on the Korean ECL (Existing Chemicals List)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)

Epoxy White (025085-99-8)

Carbon Black (1333-86-4)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)

15.3. US State regulations

QUIKSTEEL CARDED 2 OZ.	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - California - Proposition 65

GMP-800 (Trade Secret)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	Yes	Yes	

2,2-Bis-[4-(2,3-Epoxypropoxy) Phenyl] Propane, Polymer **(25085-99-8)**

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Electronic Grade Resin (28064-14-4)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

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Epoxy White (025085-99-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

2,4,6-Tris (Dimethylaminomethyl) Phenol (90-72-2)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

DMP-30				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Carbon Black (1333-86-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
Yes	No	No	No	

Iron (III) Oxide (1309-37-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Manganese (7439-96-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Silicon, Crystalline (7440-21-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Chromium (7440-47-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Talc (14807-96-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Dolomite (16389-88-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Magnesium Carbonate (546-93-0)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Quartz (14808-60-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

GMP-800 (Trade Secret)

State or local regulations

U.S. - California - Proposition 65

Carbon Black (1333-86-4)

State or local regulations

U.S. - California - Proposition 65
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know List

SECTION 16: Other information

Other information : None.

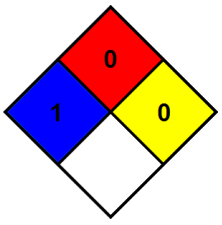
Full text of H-phrases:

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H350	May cause cancer
H351	Suspected of causing cancer

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - TCC

The Supplier identified in Section 1 of this SDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 07/17/2015 Reviewed on 07/17/2015

1 Identification

· **Product identifier**

· **Trade name: Rubber Cement**

· **Synonyms:**
Tube Repair Patch Kit, Tube Patch Kit with Levers, Tire Tackle Kit 22 Piece, Tire Plug Kit Pistol Grip Handle, Tire Plug Kit With T-Handle, Tube Patch Kit With Glue, Tire Repair Plugs 30 Pack, Tire Repair Plugs With Glue 5 Pack, Tire Tackle Kit 54 Piece, Tire Plug Kit With Pencil Gauge, Rubber Cement Carded Tube, Rubber Cement Brush Top Can, AM Rubber Cement

· **Recommended use and restriction on use**
· **Recommended use:** No further relevant information available.
· **Restrictions on use:** See Sections 8 and 10 for further information.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
ITW Global Tire Repair, Inc.
125 Venture Drive, Suite 210, San Luis Obispo, CA 93401
Tel (805) 489-0490

· **Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Additional information:**
0 percent of the mixture consists of ingredient(s) of unknown toxicity.
There are no other hazards not otherwise classified that have been identified.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS02 GHS07

· **Signal word** Danger

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Trade name: Rubber Cement

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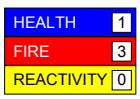
· **Hazard-determining components of labeling:**
heptane
octane
· **Hazard statements**
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
· **Precautionary statements**
P210 Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.
P281 Use personal protective equipment as required.
P233 Keep container tightly closed.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P302+P352 If on skin: Wash with plenty of water.
P403+P235 Store in a well-ventilated place. Keep cool.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

64742-89-8	Solvent naphtha (petroleum), light aliph. Asp. Tox. 1, H304	50-100%
142-82-5	heptane Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	10-30%
592-76-7	hept-1-ene Flam. Liq. 2, H225	10-30%

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111-65-9	octane Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	1-5%

· **Additional information:**
Note P : The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). This product meets that requirement.
For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**
· **General information:** Take affected persons out into the fresh air.
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn, if possible.
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
Headache
Dizziness
Nausea
Gastric or intestinal disorders when ingested.
· **Danger**
Danger of impaired breathing.
Danger of convulsion.
Condition may deteriorate with alcohol consumption.
· **Indication of any immediate medical attention and special treatment needed**
If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary edema.
Treat skin and mucous membrane with antihistamine and corticoid preparations.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Foam
Alcohol resistant foam

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Gaseous extinguishing agents
Carbon dioxide
Fire-extinguishing powder
ABC powder
· **For safety reasons unsuitable extinguishing agents:**
Water spray
Water stream.
· **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
In certain fire conditions, traces of other toxic gases cannot be excluded.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** No further relevant information available.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Keep away from ignition sources.
Protect from heat.
· **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Clean the affected area carefully; suitable cleaners are:
Organic solvent
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** Use only in well ventilated areas.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Flammable gas-air mixtures may be formed in empty receptacles.

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Trade name: Rubber Cement

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· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Provide ventilation for receptacles.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Store receptacle in a well ventilated area.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
142-82-5 heptane	
PEL (USA)	Long-term value: 2000 mg/m³, 500 ppm
REL (USA)	Long-term value: 350 mg/m³, 85 ppm Ceiling limit value: 1800* mg/m³, 440* ppm *15-min
TLV (USA)	Short-term value: 2050 mg/m³, 500 ppm Long-term value: 1640 mg/m³, 400 ppm
EL (Canada)	Short-term value: 500 ppm Long-term value: 400 ppm
EV (Canada)	Short-term value: 2.045 mg/m³, 500 ppm Long-term value: 1.635 mg/m³, 400 ppm
LMPE (Mexico)	Short-term value: 500 ppm Long-term value: 400 ppm
111-65-9 octane	
PEL (USA)	Long-term value: 2350 mg/m³, 500 ppm n-Octane only
REL (USA)	Long-term value: 350 mg/m³, 75 ppm Ceiling limit value: 1800* mg/m³, 385* ppm *15 min
TLV (USA)	Long-term value: 1401 mg/m³, 300 ppm
EL (Canada)	Long-term value: 300 ppm
EV (Canada)	Short-term value: 1.750 mg/m³, 375 ppm Long-term value: 1.400 mg/m³, 300 ppm
LMPE (Mexico)	Long-term value: 300 ppm

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Trade name: Rubber Cement

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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· **Engineering controls:** Take precautionary measures against static discharge.
· **Breathing equipment:**
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
Use suitable respiratory protective device when high concentrations are present.
· **Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**
Contact lenses should not be worn.


Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No further relevant information available.
· **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

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Trade name: Rubber Cement

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
Form: Viscous
Color: Light yellow
· **Odor:** Solvent-like
· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 90 °C (194 °F)

· **Flash point:** -9 °C (16 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Auto-ignition temperature:** 210 °C (410 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.

· **Explosion limits:**
Lower: 1.1 Vol %
Upper: 6.7 Vol %

· **Vapor pressure at 20 °C (68 °F):** 160 hPa (120 mm Hg)

· **Density at 20 °C (68 °F):** 0.7 g/cm³ (5.842 lbs/gal)
· **Relative density** Not determined.
· **Vapour density** Not determined.
· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**
Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not determined.
Kinematic at 40 °C (104 °F): 1000 mm²/s
· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

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Trade name: Rubber Cement

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· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Highly flammable liquid and vapor.
Forms flammable gases / fumes.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
Reacts violently with oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
· **Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
142-82-5 heptane		
Oral	LD50	> 5000 mg/kg (rat) (Estimate)
Inhalative	LC50/4 h	103 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Subacute to chronic toxicity:** Vapors have narcotic effect.
· **Additional toxicological information:** Irritant

· **Carcinogenic categories**

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Probable Routes of Exposure**
Ingestion.
Inhalation.
Eye contact.
Skin contact.

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Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

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Trade name: Rubber Cement

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** The material is harmful to the environment.
· **Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
· **Behavior in environmental systems:**
· **Bioaccumulative potential**
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:**
Very toxic for fish
The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.
Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
· **Additional ecological information:**
· **General notes:**
This statement was deduced from products with a similar structure or composition.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Solvent naphtha

14 Transport information

· **UN-Number**
· **DOT, ADR, IMDG, IATA** UN1133
· **UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

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Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 07/17/2015 Reviewed on 07/17/2015

Trade name: Rubber Cement

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· **DOT** ADHESIVES,Flammable Liquid
· **ADR** 1133 ADHESIVES, ENVIRONMENTALLY HAZARDOUS,Flammable Liquid
· **IMDG** ADHESIVES (HEPTANES, OCTANES), MARINE POLLUTANT,Flammable liquid.
· **IATA** ADHESIVES, Flammable
· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids
· **Label** 3

· **ADR**



· **Class** 3 (F1) Flammable liquids
· **Label** 3

· **IMDG**



· **Class** 3 Flammable liquids
· **Label** 3

· **IATA**



· **Class** 3 Flammable liquids
· **Label** 3
· **Packing group**
· **DOT, ADR, IMDG, IATA** II
· **Environmental hazards:** Product contains environmentally hazardous substances: heptane, octane
· **Marine pollutant:** Yes
Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)
· **Special precautions for user** Warning: Flammable liquids
· **Danger code (Kemler):** 33
· **EMS Number:** F-E,S-D
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 07/17/2015 Reviewed on 07/17/2015

Trade name: Rubber Cement

(Contd. of page 10)

· **Transport/Additional information:**

· **DOT**
· **Remarks:** Consumer commodity limited quantity <66lbs/30Kg
Special marking with the symbol (fish and tree).
· **UN "Model Regulation":** UN1133, Adhesives, ENVIRONMENTALLY HAZARDOUS, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

142-82-5	heptane	D

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **State Right to Know Listings**
None of the ingredients is listed.

(Contd. on page 12)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 07/17/2015 Reviewed on 07/17/2015

Trade name: Rubber Cement

(Contd. of page 11)

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**	
142-82-5	heptane
111-65-9	octane

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 07/17/2015 / -

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

· **Sources**
SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: ROHPER LSPR 6PK HAMMER METAL SILVER 15OZ

Revision Date: 8/7/2018

Product Identifier: 209562

Supercedes Date: 3/14/2018

Recommended Use: Topcoat/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Rust-Oleum Canada (ROCA)
200 Confederation Parkway
Concord, ON L4K 4T8
Canada
Emergency Phone: 800-387-3625

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word
Danger

Possible Hazards
26% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Germ Cell Mutagenicity, category 1B	H340	May cause genetic defects.
Carcinogenicity, category 1B	H350	May cause cancer.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.

STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P271	Use only outdoors or in a well-ventilated area.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P272	Contaminated work clothing should not be allowed out of the workplace.

P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	For specific treatment see label

GHS SDS PRECAUTIONARY STATEMENTS

P363	Wash contaminated clothing before reuse.

3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.%	GHS Symbols	GHS Statements
Acetone	67-64-1	43	GHS02-GHS07	H225-319-332-336
Propane	74-98-6	15	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	7.9	GHS08	H304
n-Butane	106-97-8	7.1	GHS04	H280
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	GHS02-GHS07	H226-315-319-332
Aluminum Flake	7429-90-5	1.5	GHS02	H228-261
Propylene Glycol Monobutyl Ether	5131-66-8	1.5	GHS07	H302-315-319
Ethylbenzene	100-41-4	1.2	GHS02-GHS07-GHS08	H225-304-332-351-373
Solvent Naphtha, Light Aromatic	64742-95-6	0.4	GHS07-GHS08	H304-332-340-350
Stoddard Solvent	8052-41-3	0.4	GHS08	H304-372
Ethylene Glycol Monobutyl Ether	111-76-2	0.2	GHS07	H302-312-315-319-332
Methyl ethyl ketoxime	96-29-7	0.1	GHS05-GHS06-GHS08	H302-312-317-318-331-351

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat due to buildup of steam. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Contents under pressure. Do not expose to heat or store above 120 ° F. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	45.0	250 ppm	500 ppm	1000 ppm	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	N.E.	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Aluminum Flake	7429-90-5	5.0	1 mg/m3	N.E.	15 mg/m3	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Solvent Naphtha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	1.0	20 ppm	N.E.	50 ppm	N.E.
Methyl ethyl ketoxime	96-29-7	1.0	10 ppm	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application. Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.750	**pH:**	N.A.
Freeze Point, °C:	ND	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 171	**Explosive Limits, vol%:**	0.7 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Flammable hydrogen gas will evolve when product comes in contact with water or damp air. Heat will be generated. The amount of heat generated will depend upon the volume of material in contact. Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation. May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
5131-66-8	Propylene Glycol Monobutyl Ether	1900 mg/kg Rat	N.E.	N.E.

100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
64742-95-6	Solvent Naphtha, Light Aromatic	8400 mg/kg Rat	>2000 mg/kg Rabbit	N.E.
111-76-2	Ethylene Glycol Monobutyl Ether	470 mg/kg Rat	1,060 mg/kg Rabbit	11 mg/L
96-29-7	Methyl ethyl ketoxime	930 mg/kg Rat	1100 mg/kg Rabbit	>4.8 mg/L Rat

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems. Do not incinerate closed containers. This product as supplied is a USEPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Gas under pressure, Carcinogenicity, Respiratory or Skin Sensitization, Serious eye damage or eye irritation, Specific target organ toxicity (single or repeated exposure), Germ cell mutagenicity

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Aluminum Flake	7429-90-5
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether	111-76-2

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

Volatile Organic Compounds 490 g/L

SDS REVISION DATE: 8/7/2018

REASON FOR REVISION:
Substance Chemical Name Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
03 - Composition/Information on Ingredients
08 - Exposure Controls/Personal Protection
15 - Regulatory Information
16 - Other Information
Revision Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: HPERF LSPR 6PK STRIPE BLUE STRIPING

Revision Date: 3/13/2018

Product Identifier: 2326838

Supercedes Date: 8/18/2017

Product Use/Class: Striping Paint/Aerosols

Supplier:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Rust-Oleum Consumer Brands Canada (RCBC)
200 Confederation Parkway
Concord, ON L4K 4T8
Canada

Manufacturer:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word
Danger

Possible Hazards
21% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	For specific treatment see label

GHS SDS PRECAUTIONARY STATEMENTS

P363	Wash contaminated clothing before reuse.

3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.%	GHS Symbols	GHS Statements
Propane	74-98-6	14	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	14	GHS08	H304
Titanium Dioxide	13463-67-7	8.4	Not Available	Not Available
n-Butane	106-97-8	6.7	GHS04	H280
Acetone	67-64-1	5.5	GHS02-GHS07	H225-319-332-336
Hydrotreated Light Distillate	64742-47-8	3.5	GHS08	H304
n-Butyl Acetate	123-86-4	2.4	GHS02-GHS07	H226-336
Solvent Naphtha, Light Aromatic	64742-95-6	2.2	GHS07-GHS08	H304-332

Xylenes (o-, m-, p- isomers)	1330-20-7	2.1	GHS02-GHS07	H226-315-319-332
Dimethyl Carbonate	616-38-6	1.9	GHS02	H225
1,2,4-Trimethylbenzene	95-63-6	1.1	GHS02-GHS07-GHS08	H226-304-315-319-332-335
Ethylbenzene	100-41-4	0.5	GHS02-GHS07-GHS08	H225-304-332-351-373
Ethylene Glycol Monobutyl Ether	111-76-2	0.1	GHS07	H302-312-315-319-332
Methyl Ethyl Ketoxime	96-29-7	0.1	GHS05-GHS06	H302-312-317-318-331

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat due to buildup of steam. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Contents under pressure. Do not expose to heat or store above 120 ° F. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Propane	74-98-6	15.0	N.E.	N.E.	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	15.0	N.E.	N.E.	N.E.	N.E.
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Acetone	67-64-1	10.0	250 ppm	500 ppm	1000 ppm	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	N.E.	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	5.0	50 ppm	150 ppm	150 ppm	N.E.
Solvent Naphtha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Dimethyl Carbonate	616-38-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	N.E.	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	1.0	20 ppm	N.E.	50 ppm	N.E.
Methyl Ethyl Ketoxime	96-29-7	1.0	10 ppm	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application. Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.957	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation. May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
13463-67-7	Titanium Dioxide	>10000 mg/kg Rat	2500 mg/kg	N.E.
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
64742-95-6	Solvent Naphtha, Light Aromatic	8400 mg/kg Rat	>2000 mg/kg Rabbit	N.E.
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
616-38-6	Dimethyl Carbonate	13000 mg/kg Rat	>5000 mg/kg Rabbit	140 mg/L Rat
95-63-6	1,2,4-Trimethylbenzene	3280 mg/kg Rat	>3160 mg/kg Rabbit	18 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
111-76-2	Ethylene Glycol Monobutyl Ether	470 mg/kg Rat	1,060 mg/kg Rabbit	11 mg/L
96-29-7	Methyl Ethyl Ketoxime	930 mg/kg Rat	1100 mg/kg Rabbit	>4.8 mg/L Rat

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems. Do not incinerate closed containers. This product as supplied is a USEPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

No Information

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Dimethyl Carbonate	616-38-6
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether	111-76-2

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 513

SDS REVISION DATE: 3/13/2018

REASON FOR REVISION: Regulatory Formula Source Changed
Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name:	HPERF LSPR 6PK STRIPE YELLOW STRIPING	**Revision Date:**	3/13/2018
Product Identifier:	2348838	**Supercedes Date:**	5/3/2017
Product Use/Class:	Striping Paint/High Performance		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word
Danger

Possible Hazards
21% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Eye Irritation, category 2	H319	Causes serious eye irritation.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P314	Get medical advice/attention if you feel unwell.
P264	Wash hands thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10-25	GHS08	H304
Propane	74-98-6	10-25	GHS04	H280
n-Butane	106-97-8	2.5-10	GHS04	H280
Acetone	67-64-1	2.5-10	GHS02-GHS07	H225-319-332-336
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Titanium Dioxide	13463-67-7	2.5-10	Not Available	Not Available
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS08	H304
n-Butyl Acetate	123-86-4	1.0-2.5	GHS02-GHS07	H226-336
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373

Dimethyl Carbonate	616-38-6	1.0-2.5	GHS02	H225
Ethylene Glycol Monobutyl Ether	111-76-2	0.1-1.0	GHS07	H302-312-315-319-332

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat due to buildup of steam. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Contents under pressure. Do not expose to heat or store above 120 ° F. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	15.0	N.E.	N.E.	N.E.	N.E.
Propane	74-98-6	15.0	N.E.	N.E.	1000 ppm	N.E.

n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Acetone	67-64-1	10.0	250 ppm	500 ppm	1000 ppm	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	N.E.	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	5.0	50 ppm	150 ppm	150 ppm	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Dimethyl Carbonate	616-38-6	5.0	N.E.	N.E.	N.E.	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	1.0	20 ppm	N.E.	50 ppm	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application. Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.941	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation. May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
13463-67-7	Titanium Dioxide	>10000 mg/kg Rat	2500 mg/kg	N.E.
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
616-38-6	Dimethyl Carbonate	13000 mg/kg Rat	>5000 mg/kg Rabbit	140 mg/L Rat
111-76-2	Ethylene Glycol Monobutyl Ether	470 mg/kg Rat	1,060 mg/kg Rabbit	11 mg/L

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems. Do not incinerate closed containers. This product as supplied is a USEPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

No Information

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4
Dimethyl Carbonate	616-38-6
Ethylene Glycol Monobutyl Ether	111-76-2

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

16. Other Information

HMIS RATINGS

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA RATINGS

Health: 2 **Flammability:** 4 **Instability** 0

VOLATILE ORGANIC COMPOUNDS, g/L: 502

SDS REVISION DATE: 3/13/2018

REASON FOR REVISION: Regulatory Formula Source Changed
Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
15 - Regulatory Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Name on Label: LOW ODOR / Water Based Spray Paint - Primer

Product Name: LOW ODOR / Water Based Spray Paint - Primer

Revision Date: 12/9/2025

Product Identifier: WPS1887769

Supercedes Date: New SDS

Recommended Use: WERCS Use ONLY

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word
Danger

Possible Hazards
45% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS Hazard Statements

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurized container: may burst if heated.

GHS Label Precautionary Statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

3. Composition / Information on Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Dimethyl Ether	115-10-6	30-60	GHS04	H280
Ethanol	64-17-5	10-30	GHS02	H225
Titanium Dioxide	13463-67-7	3.0-7.0	Not Available	Not Available
Acetone	67-64-1	3.0-7.0	GHS02-GHS07	H225-319-332-336
Urea Formaldehyde Polymer	9011-05-6	0.5-1.5	Not Available	Not Available

Actual concentrations of ingredients are withheld as trade secret.

4. First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed. Remove contact lenses, if present and easy to do. Continue rinsing.

First Aid - Skin Contact: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: If swallowed, do not induce vomiting. If victim is conscious and alert, give 2 to 4 cupfuls of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Treat symptomatically and supportively.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Aqueous Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire and Explosion Hazards: FLASH POINT IS LESS THAN -7°C (20°F). EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

Special Fire Fighting Procedures: Water may be used to cool closed containers to prevent buildup of steam. If water is used, fog nozzles are preferred. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): Not a combustible dust.

6. Accidental Release Measures

Steps to Be Taken If Material Is Released or Spilled: If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations. Do not incinerate closed containers Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing. Do not puncture or incinerate (burn) container, even after use.

Storage: Contents under pressure. Do not store above 120°F (49°C). Store large quantities in buildings designed and protected for storage of flammable aerosols. Keep away from heat, sparks, flame and sources of ignition.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Dimethyl Ether	115-10-6	45.0	N.E.	N.E.	N.E.	N.E.
Ethanol	64-17-5	20.0	N.E.	1000 ppm	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	10.0	0.2 mg/m3	N.E.	15 mg/m3	N.E.
Acetone	67-64-1	10.0	250 ppm	500 ppm	1000 ppm	N.E.
Urea Formaldehyde Polymer	9011-05-6	5.0	N.E.	N.E.	N.E.	N.E.

PERSONAL PROTECTION

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 (U.S.) and/or SOR/86-304 Part XII 12.13 and CSA Standard Z180.1 (Canada) requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Skin Protection: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other Protective Equipment: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information

9. Physical and Chemical Properties

Physical State	Liquid	**Decomposition Temperature, °C**	N.D.
Color	No Information	**pH**	N.A.
Odor	Solvent Like	**Kinematic Viscosity**	N.D.
Odor Threshold	N.E.	**Solubility in Water**	Miscible
Freezing Point / Melting Point, °C	N.D.	**Partition Coefficient, n-octanol/ water**	N.D.
Boiling Range, °C	-24 - 537	**Vapor Pressure**	N.D.
Flammability	Supports Combustion	**Evaporation Rate**	Slower than Ether
Lower Explosion Limit, vol%	1.9	**Specific Gravity**	0.830
Upper Explosion Limit, vol%	19.0	**Vapor Density**	Heavier than Air
Flash Point, °C	-41		
Auto-Ignition Temperature, °C	N.D.	**Particle Characteristics**	No Information

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

Conditions to Avoid: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition. Avoid excess heat.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

11. Toxicological Information

Effects of Overexposure - Eye Contact: Irritating, and may injure eye tissue if not removed promptly.

Effects of Overexposure - Skin Contact: Low hazard for usual industrial handling or commercial handling by trained personnel.

Effects of Overexposure - Inhalation: High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist.

Effects of Overexposure - Ingestion: Substance may be harmful if swallowed.

Effects of Overexposure - Chronic Hazards: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES
The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64-17-5	Ethanol	7060 mg/kg Rat	15,800 mg/kg Rabbit	30,000 mg/L Rat
13463-67-7	Titanium Dioxide	>2000 mg/kg Rat	6000	N.E.
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
9011-05-6	Urea Formaldehyde Polymer	8394 mg/kg Rat	N.E.	25 mg/L

N.E. - Not Established

12. Ecological Information

Ecological Information: No ecotoxicity data was found for this product.

13. Disposal Considerations

Disposal: Do not incinerate closed containers. Dispose of material in accordance to local, state, and federal regulations and ordinances. This product as supplied is a US EPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	1950
Proper Shipping Name:	Paint and Related Spray Products in Ltd Qty	Aerosols	Aerosols, flammable	AEROSOLS, flammable
Hazard Class:	N.A.	2	2.1	2.1
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

None Known

SARA Section 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Pigment Green 7	1328-53-6

Toxic Substances Control Act

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

16. Other Information

HMIS RATINGS

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA RATINGS

Health: 2 **Flammability:** 4 **Instability:** 0

Maximum Incremental Reactivity: 0.61

SDS REVISION DATE: 12/9/2025

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.D. - Not Determined, N.E. - Not Established

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Name on Label: Stops Rust Gloss Protective Enamel Black

Product Name: STRUST +SSPR 6PK GLOSS BLACK

Revision Date: 6/10/2026

Product Identifier: 7779830

Supercedes Date: 7/20/2023

Recommended Use: Topcoat/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word
Danger

Possible Hazards
31% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS Hazard Statements

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurized container: may burst if heated.
Eye Irritation, category 2A	H319	Causes serious eye irritation.
STOT, Single Exposure, category 3, NE	H336	May cause drowsiness or dizziness.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Reproductive Toxicity, category 1B	H360	May damage fertility or the unborn child.
STOT, Repeated Exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS Label Precautionary Statements

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust, fumes, gas, mist, vapours, or spray.

P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection, and face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice.
P312	Call a POISON CENTER or physician if you feel unwell.
P337+P317	If eye irritation persists: Get medical help.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P501	Dispose of contents and container in accordance with local, regional and national regulations.

3. Composition / Information on Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Acetone	67-64-1	10-30	GHS02-GHS07	H225-319-332-336
Propane	74-98-6	10-30	GHS04	H280
n-Butane	106-97-8	5.0-10	GHS04	H280
n-Butyl Acetate	123-86-4	3.0-7.0	GHS02-GHS07	H226-336
Barium Sulfate	7727-43-7	3.0-7.0	GHS07	H332
Xylenes (o-, m-, p- Isomers)	1330-20-7	3.0-7.0	GHS02-GHS07	H226-315-332
Dimethyl Carbonate	616-38-6	1.0-5.0	GHS02-GHS06	H225-331
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	1.0-5.0	GHS08	H304
Carbon Black	1333-86-4	0.5-1.5	Not Available	Not Available
Propylene Glycol Monobutyl Ether	5131-66-8	0.5-1.5	GHS07	H315-319
Ethylbenzene	100-41-4	0.5-1.5	GHS02-GHS07-GHS08	H225-304-332-351-373
Zirconium 2-Ethylhexanoate	22464-99-9	0.1-1.0	GHS08	H360
Cobalt 2-Ethylhexanoate	136-52-7	0.1-1.0	GHS08	H360

Actual concentrations of ingredients are withheld as trade secret.

4. First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed. Remove contact lenses, if present and easy to do. Continue rinsing.

First Aid - Skin Contact: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: If swallowed, do not induce vomiting. If victim is conscious and alert, give 2 to 4 cupfuls of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Treat symptomatically and supportively. Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Aqueous Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire and Explosion Hazards: FLASH POINT IS LESS THAN -7°C (20°F). EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

Special Fire Fighting Procedures: Water may be used to cool closed containers to prevent buildup of steam. If water is used, fog nozzles are preferred. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): Not a combustible dust.

6. Accidental Release Measures

Steps to Be Taken If Material Is Released or Spilled: If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations. Do not incinerate closed containers Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Do not get in eyes, on skin or clothing. Do not puncture or incinerate (burn) container, even after use.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120°F (49°C). Store large quantities in buildings designed and protected for storage of flammable aerosols. Keep away from heat, sparks, flame and sources of ignition. Contents under pressure. Do not expose to heat or store above 120°F (49°C).

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	30.0	250 ppm	500 ppm	1000 ppm	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	50 ppm	150 ppm	150 ppm	N.E.
Barium Sulfate	7727-43-7	10.0	5 mg/m3	N.E.	15 mg/m3	N.E.
Xylenes (o-, m-, p- Isomers)	1330-20-7	10.0	20 ppm	N.E.	100 ppm	N.E.
Dimethyl Carbonate	616-38-6	5.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	5.0	100 ppm	N.E.	N.E.	N.E.
Carbon Black	1333-86-4	5.0	3 mg/m3	N.E.	3.5 mg/m3	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Zirconium 2-Ethylhexanoate	22464-99-9	1.0	5 mg/m3	10 mg/m3	5 mg/m3	N.E.
Cobalt 2-Ethylhexanoate	136-52-7	1.0	N.E.	N.E.	N.E.	N.E.

PERSONAL PROTECTION

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 (U.S.) and/or SOR/86-304 Part XII 12.13 and CSA Standard Z180.1 (Canada) requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other Protective Equipment: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications. Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information

9. Physical and Chemical Properties

Physical State	Liquid	**Decomposition Temperature, °C**	N.D.
Color	Black	**pH**	N.A.
Odor	Solvent Like	**Kinematic Viscosity**	N.D.
Odor Threshold	N.E.	**Solubility in Water**	Slight
Freezing Point / Melting Point, °C	N.D.	**Partition Coefficient, n-octanol/water**	N.D.
Boiling Range, °C	-37 - 3,000	**Vapor Pressure**	N.D.
Flammability	Supports Combustion	**Evaporation Rate**	Faster than Ether
Lower Explosion Limit, vol%	0.9	**Specific Gravity**	0.778
Upper Explosion Limit, vol%	13.0	**Vapor Density**	Heavier than Air
Flash Point, °C	-96	**Particle Characteristics**	N.A.
Auto-Ignition Temperature, °C	N.D.		

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

Conditions to Avoid: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition. Avoid excess heat.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

11. Toxicological Information

Effects of Overexposure - Eye Contact: Can cause severe eye irritation. Causes eye and skin irritation which may lead to dermatitis with repeated exposures. Irritating, and may injure eye tissue if not removed promptly.

Effects of Overexposure - Skin Contact: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation. Low hazard for usual industrial handling or commercial handling by trained personnel.

Effects of Overexposure - Inhalation: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

Effects of Overexposure - Ingestion: Substance may be harmful if swallowed.

Effects of Overexposure - Chronic Hazards: May damage fertility or the unborn child. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included

liver, cardiac abnormalities and nervous system damage. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause genetic defects.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES
The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
7727-43-7	Barium Sulfate	307000 mg/kg Rat	N.E.	N.E.
1330-20-7	Xylenes (o-, m-, p- Isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
616-38-6	Dimethyl Carbonate	13000 mg/kg Rat	5000 mg/kg Rabbit	>5.36 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
1333-86-4	Carbon Black	>10000 mg/kg Rat	>2000 mg/kg Rabbit	N.E.
5131-66-8	Propylene Glycol Monobutyl Ether	3300 mg/kg Rat	>2000 mg/kg Rat	N.E.
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
136-52-7	Cobalt 2-Ethylhexanoate	3129 mg/kg Rat	>5000 mg/kg Rabbit	N.E.

N.E. - Not Established

12. Ecological Information

Ecological Information: Product is a mixture of listed components. No ecotoxicity data was found for this product.

13. Disposal Considerations

Disposal: Do not incinerate closed containers. Dispose of material in accordance to local, state, and federal regulations and ordinances. This product as supplied is a US EPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation. EPA Hazardous Waste Number (RCRA): D005 (Barium). Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 100.0 mg/L.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	1950
Proper Shipping Name:	Paint and Related Spray Products in Ltd Qty	Aerosols	Aerosols, flammable	AEROSOLS, flammable
Hazard Class:	N.A.	2	2.1	2.1
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Carcinogenicity, Reproductive toxicity, Serious eye damage or eye irritation, Specific target organ toxicity (single or repeated exposure)

SARA Section 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Barium Sulfate	7727-43-7
Xylenes (o-, m-, p- Isomers)	1330-20-7
Ethylbenzene	100-41-4
Cobalt 2-Ethylhexanoate	136-52-7

Toxic Substances Control Act

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

16. Other Information

HMIS RATINGS

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA RATINGS

Health: 2 **Flammability:** 4 **Instability:** 0

Maximum Incremental Reactivity: 0.94

SDS REVISION DATE: 6/10/2026

REASON FOR REVISION:

Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
01 - Identification
02 - Hazard Identification
03 - Composition / Information on Ingredients
05 - Fire-Fighting Measures
08 - Exposure Controls / Personal Protection
09 - Physical & Chemical Properties
11 - Toxicological Information
14 - Transport Information
15 - Regulatory Information
Substance Hazard Threshold % Changed
Substance Hazardous Flag Changed
Revision Statement(s) Changed

Legend: N.A. - Not Applicable, N.D. - Not Determined, N.E. - Not Established

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

SAFETY DATA SHEET

SAND CLOTH

DATE PRINTED: NOV. 12, 2015

MSDS N. ALCOAT001 OUTBOUND CARBORUNDUM

ALUMINUM OXIDE OR SILICON CARBIDE COATED ABRASIVE (ALL SPEC.)

SECTION 1. CHEMICAL PRODUCT AND COMPANY IMFORMATION

PRODUCT NAME : Aluminum Oxide Or Silicon Carbide Coated Abrasive

MANUFACTURER (1):

SELF-REALIZATION CO., LTD

#NO.66, SINCUO LU., HAIFONG RD., SIHU TOWNSHIP, CHANGHUA COUNTY, TAIWAN, R.O.C.

TEL: (+886) – 4 – 8828657 FAX : (+886) – 4 – 8825272

REVISION DATE:

11/12/2015

MSDS PRINT FORMAT:

CANAUSA

SECTION 2. HAZARDS IDENTIFICATION

INHALATION ACUTE EXPOSURE EFFECTS

Dust may be slightly irritation to eyes and respiratory tract at high concentrations.

INHALATION CHRONIC EXPOSURE EFFECTS

Chronic: May affect breathing capacity

For products containing phenol / formaldehyde resin, dust generated from intended use may contain trace amounts of phenol and formaldehyde which under excessive exposure may cause skin sensitization

And airway obstruction.

For products containing inorganic fluorides:

Excessive exposure to inorganic fluorides has been shown to increase bone density.

EYE CONTACT ACUTE EXPOSURE EFFECTS

Dust may irritate eyes.

SKIN CONTACT ACUTE EXPOSURE EFFECTS

Some may experience skin irritation form dust.

INGESTION ACUTE EXPOSURE EFFECTS

No known adverse effects, but ingestion not recommended.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE DESCRIPTION	PERCENT	CAS#
Aluminum Oxide Or Silicon Carbide	18.000 – 28.000	1344-28-1
Cloth or Paper Backing	48.000 – 58.000	N/A
Binder System	15.000 – 30.000	N/A
Calcium Carbonate	14.000 – 24.000	1317-65-3

* SUBSTANCE IS A COMPOUND AND/OR MIXTURE

OTHER: Not Applicable

SECTION 4. FIRST AID MEASURES

INHALATION

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.

SKIN CONTACT: Wash affected areas with soap and water. Obtain medical assistance

EYE CONTACT: Wash with large amounts of water. Obtain first aid and medical assistance, if needed.

INGESTION: Call poison control center, hospital emergency room or physician immediately.

SECTION 5. FIRE FIGHTING MEASURES

FIRE FIGHTING PROCEDURES: Not Applicable

FLASH POINT: F C NA

HAZARDOUS PRODUCTS / COMBUSTION: NONE

HAZARD RATING SOURCE: NFPA

HEALTH : 1 FLAMMABILITY : 0 REACTIVITY : 0 OTHER : 0

SECTION 6. ACCIDENTAL RELEASE MEASURES

CLEAN-UP: Follow normal clean up procedures.

SECTION 7. HENDLING AND STORAGE

HANDLING: Handle with adequate ventilation for nuisance dust.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION PROTECTION

Recommend using local exhaust ventilation when general ventilation is not keeping the airborne concentration below the TLV.

PESPIRATORY PROTECTION

Respirators are required when airborne contaminant levels exceed the TLV(S).

EYE PROTECTION

Always wear safety glasses or some type of eye protection while sanding.

OTHER PROTECTION

Use of this product may create elevated sound levels. Hearing protection should be worn where required (as OSHA 29 CFR 1910. 134 and other applicable regulations).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & ODOR: Solid article, Odorless.

FLAMMABILITY (SOLID) : Non-Flammable

EXPLOSION LIMITS : No Information Available.

DUST'S EXPLOSIVE POTENTIAL : No Information Available.

SECTION 10. STABILITY AND REACTIVITY

INCOMPATIBILITIES: Avoid acids of all types with a PH < 4.0~7.0

DECOMPOSITION: In use, dust and decomposing odors may be generated. In most cases, the material removed from the workplace will be significantly greater than the sandpaper components.

Coolants may produce other decomposition products.

For products containing phenol and formaldehyde resin, thermal decomposition may produce trace amounts of phenol and formaldehyde.

For products containing inorganic fluorides, thermal composition may produce trace amounts of fluorides.

SECTION 11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY: Not applicable LD50 / LC50

Values are not appropriate or available.

SECTION 12. ECOLOGICAL INFORMATION

CHEMICAL FATE: Not Applicable

PERSISTENCE AND DEGRADABILITY : No Information Available.

BIOACCUMULATIVE POTENTIAL : No BIOACCUMULATIVE.

MOBILITY IN SOIL : No Information Available.

OTHER ADVERSE EFFECT : -

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Use standard landfill methods consistent with applicable federal, State, Provincial and local laws.

SECTION 14. TRANSPORT INGORMATION

HAZARD CLASS: This product is not hazardous as defined by the Department of Transportation. (USA)

This product is "Not Regulated" under the Transportation of Dangerous Goods Act. (CAN)

SECTION 15. REGULATORY INFORMATION

REGULATORY INFORMATION

SUBSTANCE DESCRIPTION	UNIT	OSHA	ACGIH	MOL
Aluminum Oxide Or Silicon Carbide	MG/M3	15.0000	10.0000	10.0000
Cloth or Paper Backing	PPM	0.0000	0.0000	0.0000
Binder System	PPM	0.0000	0.0000	0.0000
Calcium Carbonate	MG/M3	15.0000	10.0000	10.0000

LEGEND: EXPOSURE LIMIT DESCRIPTIONS

CA PROP 65

Not Applicable

TSCA

SECTION 8. (b) – Inventory Status

All components of this product are registered under the regulations of the Toxic Substance Control Act.

DOMESTIC SUBSTANCE LIST

All components of this product are found on the Domestic Substance List.

SECTION 16. OTHER INFORMATION

KEY TO ABBREVIATIONS

EQ = Equal	LT = Less Than	GT = Greater Than
AP = Approximately	TR = Trace	ND = No Data available

DISCLAIMER

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof: however, the company makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.

700-99-483

MATERIAL SAFETY DATA SHEET

MSDS Name: SEAL-GAP ROOF SEALER # AH-55-A
Version Number
MSDS Date: JUN-26-2001
Page Number: 1

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: **SEAL-GAP ROOF SEALER # AH-55-A**
Hazard Rating: Health: 1 Fire: 3 Reactivity: 0 PPI: B

Company name: SEAL-GAP COMPANY
phone: 352-589-0406
P.O. BOX 696
EUSTIS
FL 32727-0696

Contact: Safety Officer
Emergency Phone (24 hour) CHEMTREC
(800) 424-9300
Chemtrec (outside-USA) (703) 527-3887

SECTION II - INGREDIENT AND HAZARD INFORMATION

Ingredient Name	CAS Number	Percent	TSCA
HEPTANE	142-82-5	15 - 25	Y
PETROLEUM NAPHTHA	64742-89-8	15 - 25	Y
XYLENE	1330-20-7	< 5.0	Y

- -

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: Medium viscosity sealant
Appearance/Color: Aluminum
Solubility (in water): insoluble
pH Value, +/-.3: Not Applicable
Boiling Range: 180.°F - 280.°F (82.22°C - 137.78°C)
Vapor Pressure (mmHg): over 40.@ 68.°F (20.°C)
Evaporation Rate: 2.5 times Faster than n-Butyl Acetate

Vapor Density: Heavier than air

% Volatile, Weight approx. 55.%
% Volatile, Volume approx, 65.%
Specific Gravity: 0.94641

VOC (less H2O or exempt) 500 gr/L
Heavy Elements (ppm) 0.

NOTE:
*BOIL RANGE, EVAP RATE, VAPOR DENSITY AND PRESSURE FOR SOLVENT ONLY!

- -

SECTION IV - FIRE FIGHTING MEASURES (Flash,UEL,LEL for solvent only)

Flammability Class I B
Flash Range: 21.°F (-6.11°C)
Tag Closed Cup
Explosive Range (LEL/UEL): 0.9%
6.7%

EXTINGUISHING MEDIA:
Carbon Dioxide---Dry Chemical---Foam
Use water to cool material in vicinity of fire.
SPECIAL FIRE-FIGHTING PROCEDURES:
Use self-contained breathing apparatus with full facepiece operated in pressure demand or other positive pressure mode.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Water may be unsuitable except as a cooling agent. Use fog nozzle.
Any closed container may rupture when exposed to extreme heat.
Solvent vapors are heavier than air and travel along the ground.

- -

SECTION V - HEALTH HAZARD DATA

ROUTES OF ENTRY:
ENTRY THROUGH...
Inhalation? Yes | Skin? Yes | Ingestion? Yes
TARGET ORGANS...
Normal Exposure -- Xylene: Eye, Skin
-- Petroleum Naphtha: Eyes, Skin
Overexposure -- Xylene: Central Nervous System, Respiratory Tract, May aggravate pre-existing heart conditions. May cause adverse health affect on Kidney and Liver on chronic overexposure.
-Petroleum Naphtha: Central Nervous System, Nose & Throat Irritation, Lung, Liver
CARCINOGENICITY...
NTP? N/E | IARC Monographs? N/E | OHSA? NO
EFFECTS OF OVEREXPOSURE

Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Prolonged or repeated contact can cause moderate irritation, defatting, and dermatitis.
Inhalation: Excessive inhalation of vapors can cause respiratory irritation, headache, drowsiness and fatigue. High concentrations of vapors are anesthetic and may cause central nervous system effects such as dizziness.
Ingestion: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver or kidney damage and mucous membrane irritation. INTENTIONAL misuse of this product by deliberately inhaling its vapors may be harmful or fatal.

FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes lifting eyelids occasionally; get prompt medical attention
Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing.
Inhalation: Move affected person to fresh air; if breathing is difficult, administer oxygen; if breathing has stopped, give artificial respiration. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING! Get immediate medical attention.

- -

SECTION VI - STABILITY AND REACTIVITY

Stability: This product is stable
Hazardous Polymerization: Hazardous polymerization will not occur

INCOMPATABILITY:

Keep away from strong oxidizing agents.

CONDITIONS TO AVOID:

Keep away from heat, spark, open flames and any ignition source.

HAZARDOUS DECOMPOSITION PRODUCTS:

Will produce fumes and smoke containing carbon monoxide and dioxide under fire conditions.

- -

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:

STEPS TO BE TAKEN IN CASE OF SPILL:

Eliminate all ignition sources. Ventilate confined areas. (Open windows and doors). Wear appropriate protective clothing.

Cover with absorbent. Scoop into sealable safety container.
WASTE DISPOSAL METHOD:
Dispose of following local, state, and federal regulations.

- -

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
HEPTANE	400.00 PPM	N/est	N/est	N/est	400.00 PPM
PETROLEUM NAPHTHA	300.00 PPM	N/est	N/est	400.00 PPM	300.00 PPM
XYLENE	100.00 PPM	N/est	150.00 PPM	150.00 PPM	100.00 PPM

RESPIRATORY PROTECTION:
If TLV of the product is exceeded, a NIOSH/MSHA jointly approved air supply respirator is advised in the absence of proper ventilation. OSHA regulations also permit the use of other types of NIOSH/MSHA respirators under specified conditions. (See your safety equipment supplier for more information)
VENTILATION:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV.
Ventilate during application and curing of this product.
PROTECTIVE CLOTHING:
Rubber gloves should be worn where skin contact is likely.
Wear impervious clothing and shoes.
EYE PROTECTION:
Chemical goggles or safety glasses should be worn.
HANDLING AND STORAGE PRECAUTIONS:
Keep away from heat, spark and flame.
Keep out of reach of children.
Keep container closed while not in use.
Do not cut or burn recepticals that have contained a solvent based product. Do not reuse this container.
Use only in a well ventilated area.

N/A=NOT APPLICABLE N/AV=NOT AVAILABLE N/E, N/est=NOT ESTABLISHED

SECTION IX - TRANSPORT INFORMATION:

DOT CLASSIFICATIONS FOR ONE GALLON AND UNDER CONTAINERS

DESCRIPTION: ORM-D, Consumer commodity
CLASS/ UN NO.: none
DOT LABEL: ORM-D (Adhesives)
IMDG class: 3.1
IMDG BOL: Adhesive, 3, UN1133, PG III, LTD QTY

DOT CLASSIFICATIONS for OVER 1 GALLON size CONTAINERS

DESCRIPTION: Adhesive
CLASS: Class 3, Packing group III
DOT LABEL: Flammable Adhesive, UN 1133
IMDG CLASS: 3.1
IMDG BOL: Adhesive, 3, UN1133, PG III

SECTION X - REGULATORY INFORMATION:
SARA TITLE III SECTION 313:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

Ingredient Name	CAS Number	Percent
XYLENE	1330-20-7	< 5.0

This material fits the EPA Hazard Category definition of Immediate (Acute) and Delayed (Chronic) Health Hazards and Fire Hazard under SARA Sections 311, 312.

Chemical ingredients are listed on the TSCA inventory.
California PROP 65 Chemicals: none known

DISCLAIMER:
The information contained herein is based on data available as of the date of preparation of this MSDS and which we believe to be

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reliable. However, no warranty is expressed or implied regarding the accuracy of the data. We shall not be responsible for the use of this information, or of any product, method, or apparatus mentioned, and the user must make his own investigation to determine the suitability of the information or products for his particular purpose, for the protection of the environment, and the health and safety of the users of this material.

Last Page

Safety Data Sheet

Issue Date: 05-Jun-2014 **Revision Date:** 20-May-2015 **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name Service Pro Hi-Temp Grease

Other means of identification
SDS # SP-033, SPL17056, SPL37056, SPL27056, SPL00276, SPL00277

Recommended use of the chemical and restrictions on use
Recommended Use Lubricant.

Details of the supplier of the safety data sheet

Supplier Address
Warren Oil Company
915 E. Jefferson Ave.
West Memphis, AR 72301

Manufactured for:
AIOD
P.O. Box 1861
Montrose, CO 81402-1861
970-249-6336 www.service-pro.com

Emergency Telephone Number
Company Phone Number 1-800-428-9284
Emergency Telephone (24 hr) Chemtrec 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Red semi-solid to solid **Physical State** Semi-solid to solid **Odor** Mild petroleum

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

Hazards Not Otherwise Classified (HNOC)
May be harmful if swallowed

Signal Word
Warning

Hazard Statements
Causes skin irritation
Causes serious eye irritation



Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection

FRS SDS Reference Library | S125 | Library page 1261

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash it before reuse
If skin irritation occurs: Get medical advice/attention

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Unknown Acute Toxicity
2.27% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Severely Hydrotreated Heavy Naphthenic Petroleum Oil	64742-52-5	60-70
Residual oils (petroleum), solvent refined	64742-01-4	1-10
Antimony diamyldithiocarbamate	15890-25-2	1-10
Lithium Hydroxide Solution	1310-66-3	1-10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice — If exposed or concerned: Get medical advice/attention. Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid.

Eye Contact — Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness or pain persists.

Skin Contact — If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Clean or discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately.

Inhalation — Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.

Ingestion — Do not induce vomiting unless directed to by a physician. Rinse out mouth with water. Never give anything by mouth to a person who is not fully conscious. Allow small quantities to pass through the digestive system. If large amounts are swallowed or irritation of discomfort, seek medical attention immediately.

Most important symptoms and effects

Symptoms May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Skin: In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal. Ingestion: Check for possible bowel obstruction with ingestion of large quantities of material.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use dry chemical, foam, carbon dioxide or water fog.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Water or foam may cause frothing. Molten material can form flaming droplets if ignited. Use of water on product above 100°C (212°F) can cause product to expand with explosive force.

Hazardous Combustion Products Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and/ or nitrogen.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces. Fight the fire from a safe distance in a protected location. Open any masses with a water stream to prevent re-ignition due to smoldering. Cool surface with water fog. Do not allow liquid runoff to enter sewers or public waters.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to section 8. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Slipping hazard; do not walk through spilled material.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewer, basements or confined areas.

Methods for Clean-Up For small spills, absorb or cover with dry earth, sand or other inert non-combustible absorbent material and place into waste containers for lateral disposal. Contain large spills to maximize product recovery or disposal. In urban areas, clean up spill as soon as possible. In natural environments, seek clean up advice from specialists to minimize physical habitat damage.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling If this product is stored or applied in high-pressure systems such as grease guns or hydraulic lines, there is the potential for accidental injection into the skin and underlying tissues. Empty containers may contain product residue that can ignite with explosive force. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5	TWA: 5 mg/m^3 (oil mist) STEL: 10 mg/m^3 (oil mist)	TWA: 5mg/m^3 (oil mist) STEL: none estab.	TWA: none estab. STEL: none estab.
Antimony diamyldithiocarbamate 15890-25-2	TWA: 0.5 mg/m^3 Sb	TWA: 0.5 mg/m^3 Sb (vacated) TWA: 0.5 mg/m^3 Sb	IDLH: 50 mg/m^3 Sb TWA: 0.5 mg/m^3 Sb
Barium Sulfonate 25619-56-1	TWA: 0.5 mg/m^3 Ba	TWA: 0.5 mg/m^3 Ba (vacated) TWA: 0.5 mg/m^3 Ba	TWA: 0.5 mg/m^3 except Barium sulfate Ba

Appropriate engineering controls

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Chemical resistant, impermeable gloves. Long sleeve shirt and long pants. Aprons. Wear a lab coat.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Semi-solid to solid		
Appearance	Red semi-solid to solid	**Odor**	Mild petroleum
Color	Red	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	Not available	
Melting Point/Freezing Point	Not available	

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Boiling Point/Boiling Range	Not available	
Flash Point	150 °C / 302 °F	Open cup
Evaporation Rate	Not available	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not available	
Lower Flammability Limit	Not available	
Vapor Pressure	<01001 kPA (<0.01 mm Hg)(at 20°C)	
Vapor Density	>10	(Air=1)
Specific Gravity	0.93	(Water = 1)
Water Solubility	Negligible	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Property	**Values**	**Remarks • Method**
Auto-ignition Temperature	Not available	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Not expected to occur.

Conditions to Avoid
Keep away from extreme heat, sparks, open flame and incompatible materials.

Incompatible Materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and/ or nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye irritation.

Skin Contact Causes skin irritation.

Inhalation Do not inhale.

Ingestion May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Lubricating oils (petroleum), hydrotreated spent 64742-58-1	> 2000 mg/kg (Rat)	> 4480 mg/kg (Rabbit)	-
Residual oils (petroleum), solvent refined 64742-01-4	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 2.18 mg/L (Rat) 4 h
Azelaic acid 123-99-9	> 5 g/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

Unknown Acute Toxicity 2.27% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50
Lubricating oils (petroleum), hydrotreated spent 64742-58-1		79.6: 96 h Brachydanio rerio mg/L LC50 semi-static 3.2: 96 h Pimephales promelas mg/L LC50 semi-static		
Residual oils (petroleum), solvent refined 64742-01-4		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

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13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Antimony diamyldithiocarbamate 15890-25-2	Toxic

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Severely Hydrotreated Heavy Naphthenic Petroleum Oil	Present	X		Present		Present	X	Present	X	X
Residual oils (petroleum), solvent refined	Present	X		Present			X	Present	X	X
Antimony diamyldithiocarbamate	Present	X		Present		Present	X		X	X
Lithium Hydroxide Solution						Present	X		X	X

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Antimony diamyldithiocarbamate - 15890-25-2	15890-25-2	2.25	1.0

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Antimony diamyldithiocarbamate		X		

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Antimony diamyldithiocarbamate 15890-25-2	X		X
Lithium Hydroxide Solution 1310-66-3	X		
Barium Sulfonate 25619-56-1	X		X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	1	1	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	1	0	Not determined

Issue Date: 05-Jun-2014
Revision Date: 24-Jul-2014
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Safety Data Sheet

Date of issue: 01/14/2026 Revised On 01/14/2026

1 Identification of the substance and manufacturer

Trade name: **GLASS CLEANER**
Other means of identification

Product code: 0000200025
Article category
Recommended use: Paint and coatings application.
Uses advised against: Any that differs from the recommended use.
Manufacturer/Supplier: Seymour of Sycamore
917 Crosby Avenue
Sycamore, IL 60178 USA
phone: 815-895-9101
www.seymourpaint.com

Seymour of Sycamore
3041 Dougall Avenue, Suite 503
Windsor, ONT N9E 1S3 CANADA
phone: 800-435-4482
www.seymourpaint.com

Emergency telephone number: 1-800-255-3924

2 Hazard(s) identification

Classification of the substance or mixture

Aerosols 3 H229 Pressurized container: may burst if heated.
Eye irritation 2B H320 Causes eye irritation.

Additional information:
GHS Hazard pictograms Void
Signal word Warning
Hazard statements Pressurized container: may burst if heated.
Causes eye irritation.
Precautionary statements Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use.
Wash thoroughly after handling.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Protect from sunlight. Do not expose to temperatures exceeding 122 °F (50 °C).

3 Composition/information on ingredients

Chemical characterization: Mixtures
Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:

64-17-5	ethyl alcohol	1-5%
111-76-2	Glycol Ether EB	1-5%
74-98-6	propane	1-5%
106-97-8	n-butane	1-5%
67-56-1	methanol	0.18%

4 First-aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Remove contaminated clothing. Wash exposed area with soap and water.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: Rinse mouth with water. Do not induce vomiting.
Most important symptoms and effects: Dizziness
Indication of any immediate medical attention needed: No further relevant information available.

5 Fire-fighting measures

Extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.
Special hazards: No further relevant information available.
Protective equipment for firefighters: A respiratory protective device may be necessary.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use respiratory protective device against the effects of fumes/dust/aerosol.
Methods and material for containment and cleaning up: Absorb liquid components with liquid-binding material.

7 Handling and storage

Precautions for safe handling Use only in well ventilated areas.

(Contd. on page 2)

Safety Data Sheet

Date of issue: 01/14/2026 Revised On 01/14/2026

Trade name: GLASS CLEANER

(Contd. of page 1)

Storage requirements: Keep away from sources of heat and direct sunlight. Do not warehouse in subfreezing conditions. Store locked up.

8 Exposure controls/personal protection

Components with limit values that require monitoring at the workplace:

64-17-5 ethyl alcohol

PEL (USA)	Long-term value: 1900 mg/m³, 1000 ppm
REL (USA)	Long-term value: 1900 mg/m³, 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m³, 1000 ppm A3

111-76-2 Glycol Ether EB

PEL (USA)	Long-term value: 240 mg/m³, 50 ppm Skin
REL (USA)	Long-term value: 24 mg/m³, 5 ppm Skin
TLV (USA)	Long-term value: 97 mg/m³, 20 ppm BEI, A3

74-98-6 propane

PEL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
REL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
TLV (USA)	see Appendix F Minimal oxygen content (D, EX)

106-97-8 n-butane

REL (USA)	Long-term value: 1900 mg/m³, 800 ppm
TLV (USA)	Short-term value: 2370 mg/m³, 1000 ppm (EX)

67-56-1 methanol

PEL (USA)	Long-term value: 260 mg/m³, 200 ppm
REL (USA)	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin
TLV (USA)	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI

Ingredients with biological limit values:

111-76-2 Glycol Ether EB

BEI (USA)	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid (BAA) (with hydrolysis)

67-56-1 methanol

BEI (USA)	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)

Hygienic protection: Wash hands after use.
Do not eat or drink while working.

Breathing equipment: A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a NIOSH approved respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygiene.

Hand protection: Nitrile gloves.
The glove material must be impermeable and resistant to the substance.

Eye protection: Not required.

9 Physical and chemical properties

Physical state Aerosol
Odor: Aromatic
Odor threshold: Not determined.
Melting point/Melting range Undetermined.
Boiling point: 100 °C (212 °F)
Flammability:
Lower Explosion Limit: Not determined.
Upper Explosion Limit: Not determined.
Flash point: Not applicable, as aerosol.
Flammability (solid, gas):
Decomposition temperature: Not determined.
pH-value: Not determined.
Viscosity: Not determined.
Solubility: Not determined.

(Contd. on page 3)

Safety Data Sheet

Date of issue: 01/14/2026 Revised On 01/14/2026

Trade name: GLASS CLEANER

(Contd. of page 2)

Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)
Relative Density: Between 0.77 and 0.85 (Water equals 1.00)
Vapor density Not determined.
Particle characteristics Not applicable.
Appearance: Aerosol.
Ignition temperature: Product is not self-igniting.
Danger of explosion: Not determined.
Water: 90.7 %
Evaporation rate Not applicable.
Partition coefficient: n-octonal/water: Not determined.

10 Stability and reactivity

Reactivity: Stable at normal temperatures.
Conditions to avoid: Do not allow can to exceed 120 degrees Fahrenheit. Do not warehouse in subfreezing temperatures.
Chemical stability: Not fully evaluated.
Possibility of hazardous reactions: No dangerous reactions known.
Incompatible materials: No further relevant information available.
Hazardous decomposition: No dangerous decomposition products known.

11 Toxicological information

LD/LC50 values that are relevant for classification:		
64-17-5 ethyl alcohol		
Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)
111-76-2 Glycol Ether EB		
Oral	LD50	1,200 mg/kg (ATE) 1,480 mg/kg (rat)
Dermal	LD50	400 mg/kg (rab)
Inhalative	LC50/4 h	3 mg/l (ATE)
67-56-1 methanol		
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

Information on toxicological effects: No data available.
Skin effects: No irritant effect.
Eye effects: No irritating effect.
Sensitization: No sensitizing effects known.

12 Ecological information

Aquatic toxicity: Hazardous for water, do not empty into drains.
Persistence and degradability: The product is degradable after prolonged exposure to natural weathering processes.
Other information: This product does not contain any chlorofluorocarbons (CFC's), hydrochlorofluorocarbons (HCFC's), perfluorocarbons (PFC's), heavy metals (chromium, lead, cadmium), per and polyfluoroalkyl substances (PFA's), or chlorinated solvents.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Other adverse effects: No further relevant information available.

13 Disposal considerations

Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.
Recommendation: Completely empty cans should be recycled.

14 Transport information

UN-Number UN1950
DOT UN1950
DOT Aerosols, non-flammable
ADR 1950 AEROSOLS
Transport hazard class(es):
Class 2.2 Gases
Special marking (IATA):
Packaging Group: --
Special precautions for user: Warning: Gases
EMS Number: F-D,S-U
UN "Model Regulation": UN 1950 AEROSOLS, 2.2

(Contd. on page 4)

Safety Data Sheet

Date of issue: 01/14/2026 Revised On 01/14/2026

Trade name: GLASS CLEANER

(Contd. of page 3)

15 Regulatory information

SARA Section 355 (extremely hazardous substances):

None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

111-76-2	Glycol Ether EB

Toxic Substances Control Act (TSCA): All ingredients are found on the inventory list of substances.

Canadian Domestic Substances List (DSL): All ingredients are listed or exempted.

Consumer Product Safety Comission (CPSC): This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

California Proposition 65 chemicals known to cause cancer:

None of the ingredients in this product are listed.

Prop 65 chemicals known to cause birth defects or reproductive harm:

67-56-1	methanol

EPA:

111-76-2	Glycol Ether EB	NL

16 Other information

Contact: Regulatory Affairs

Sikaflex®-221

Revision Date 12/03/2025 Print Date 12/03/2025

SECTION 1. IDENTIFICATION

Product name	:	Sikaflex®-221
Company name	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: +1-703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory sensitization	:	Category 1
Skin sensitization	:	Category 1
Carcinogenicity (Inhalation)	:	Category 1A
Specific target organ toxicity - repeated exposure (Inhalation)	:	Category 2

Other hazards
Intentional misuse by deliberate concentration and inhalation of vapor may be harmful or fatal.

GHS label elements

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Hazard pictograms :



Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350 May cause cancer by inhalation.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapors.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P284 Wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

Intentional misuse by deliberate concentration and inhalation of vapor may be harmful or fatal.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS No./Unique ID	Classification	Concentration (% w/w)
xylene	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304	>= 1 - <= 5
4,4'-methylenediphenyl diisocyanate	101-68-8	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2B; H320 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	>= 0.5 - <= 1.5
ethylbenzene	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Carc. 2; H351 STOT RE 2; H373 Asp. Tox. 1; H304 Eye Irrit. 2A; H319	>= 0.1 - <= 1
Quartz (SiO2)	14808-60-7	Carc. 1A; H350 STOT RE 1; H372 STOT SE 3; H335	>= 0.1 - <= 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact	:	Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Obtain medical attention.
Most important symptoms and effects, both acute and delayed	:	Asthmatic appearance Allergic reactions sensitizing effects May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer by inhalation. May cause damage to organs through prolonged or repeated exposure if inhaled.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Hazardous combustion products	:	No hazardous combustion products are known
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Deny access to unprotected persons.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for	:	Soak up with inert absorbent material (e.g. sand, silica gel,

containment and cleaning up	acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Follow standard hygiene measures when handling chemical products.
Conditions for safe storage	:	Store in original container. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
xylene	1330-20-7	TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	20 ppm	ACGIH
		STEL	150 ppm 655 mg/m3	OSHA P0
		TWA	100 ppm 435 mg/m3	OSHA P0
4,4'-methylenediphenyl diisocyanate	101-68-8	C	0.02 ppm 0.2 mg/m3	OSHA Z-1
		C	0.02 ppm 0.2 mg/m3	OSHA P0
		TWA	0.005 ppm	ACGIH
ethylbenzene	100-41-4	TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm	OSHA P0

			435 mg/m3	
		STEL	125 ppm 545 mg/m3	OSHA P0
		TWA	20 ppm	ACGIH
Quartz (SiO2)	14808-60-7	TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	0.025 mg/m3 (Silica)	ACGIH
		PEL (respirable)	0.05 mg/m3	OSHA CARC
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (Respirable particulate matter)	0.025 mg/m3 (Silica)	ACGIH

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

		The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	paste
Color	:	various
Odor	:	aromatic
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/ range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available

Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	0.01 hpa
Relative vapor density	:	No data available
Density	:	ca. 1.28 g/cm3 (73 °F / 23 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Dynamic	:	No data available
Kinematic	:	> 20.5 mm2/s (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Particle size	:	No data available
Particle Size Distribution	:	No data available
Volatile organic compounds (VOC) content	:	25 g/l

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified due to lack of data.

Components:

xylene:
Acute oral toxicity : LD50 Oral (Rat): 3,523 mg/kg

4,4'-methylenediphenyl diisocyanate:
Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50: 1.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgment

ethylbenzene:
Acute oral toxicity : LD50 Oral (Rat): 3,500 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 5,510 mg/kg

Skin corrosion/irritation
Not classified due to lack of data.

Serious eye damage/eye irritation
Not classified due to lack of data.

Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity
Not classified due to lack of data.

Carcinogenicity
May cause cancer by inhalation.

IARC	Group 1: Carcinogenic to humans	
	Quartz (SiO_2) (Silica dust, crystalline)	14808-60-7
	Group 2B: Possibly carcinogenic to humans	
	Titanium dioxide (> 10 µm)	13463-67-7
	Group 2B: Possibly carcinogenic to humans	

	Carbon black Group 2B: Possibly carcinogenic to humans	1333-86-4
	ethylbenzene	100-41-4
OSHA	OSHA specifically regulated carcinogen Quartz (SiO2) (crystalline silica)	14808-60-7
NTP	Known to be human carcinogen Quartz (SiO2) (Silica, Crystalline (Respirable Size))	14808-60-7

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

Not classified due to lack of data.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure if inhaled.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified due to lack of data.

Further information

Product:

Remarks : Carbon black (1333-86-4)
Animal Toxicity:
Rat, oral, duration 2 year
Effect: no tumors

Mouse, oral, duration 2 years
Effect: no tumors
Mouse, dermal, duration 18 months
Effect: no skin tumors
Rat, inhalation, duration 2 years
Target organ: lungs
Effect: inflammation, fibrosis, tumors
Note: Tumors in the rat lung are considered to be related to the "particle overload phenomenon" rather than to a specific chemical effect of carbon black itself in the lung. These effects in rats have been reported in many studies on other poorly soluble inorganic particles and appear to be rat specific. Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions.
Mortality studies (human data): A study on carbon black production workers in the UK (Sorahan, 2001) found an increased risk of lung cancer in two of the five plant studied;

however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant (Morfeld, 2006; Buechte, 2006) found a similar increase in lung cancer risk but, like the Sorohan, 2001 (UK study) found no association with carbon black exposure. A large US study of 18 plants showed a reduction in lung cancer risk in carbon black production workers (DEll, 2006). Based upon these studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evidence for carcinogenicity was inadequate (IARC, 2010).
Since the IARC evaluation of carbon black, Sorahan and Harrington (2007) have re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney (2009) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington.
Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated.
IARC CANCER CLASSIFICATION: In 2006 IARC re-affirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in experimental animal studies for the carcinogenicity of carbon black. IARC's overall evaluation is that carbon black is "possibly carcinogenic to humans" (Group 2B)". This conclusion was based on IARC's guidelines, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC, 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was "sufficient evidence" that carbon black extracts can cause cancer in animals (Group 2B).
ICGIH CANCER CLASSIFICATION: Confirmed Animal Carcinogen with Unknown Relevance to Humans (Category A3 Carcinogen).

ASSESSMENT: Applying the guidelines of self-classification under the Globally Harmonized System of Classification and Labeling of Chemicals, carbon black is not classified as a carcinogen. Lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rats tumors are a

result of a secondary non-genotoxic mechanism that has questionable relevance for classification in humans. In support of this opinion, the CLP Guidance for Specific Target Organ Toxicity - Repeated Exposure (STOT-RE), cites lung overload under mechanisms not relevant to humans. Human health studies show that exposure to carbon black does not increase the risk to carcinogenicity.

Titanium dioxide (13463-67-7)
In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiological studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

Quartz (14808-60-7): This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

xylene:

Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l Exposure time: 56 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia): 1.17 mg/l Exposure time: 7 d

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	Do not empty into drains; dispose of this material and its container in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Domestic regulation

49 CFR Road
Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

TSCA list	:	All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

The following substance(s) is/are subject to a Significant New Use Rule:

m-tolylidene diisocyanate	26471-62-5	See 40 CFR § 721.10789; Proposed RuleProposed Rule

No substances are subject to TSCA 12(b) export notification requirements.

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)
xylene	1330-20-7	100

SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

xylene	1330-20-7	>= 1 - < 5 %
ethylbenzene	100-41-4	>= 0.1 - < 1 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

xylene	1330-20-7	>= 1 - < 5 %

California Prop. 65

WARNING: This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer, and 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA CARC	:	OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average

OSHA CARC / PEL	:	Permissible exposure limit (PEL)
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA P0 / C	:	Ceiling limit
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-1 / C	:	Ceiling
OSHA Z-3 / TWA	:	8-hour time weighted average

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

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Revision Date 12/03/2025

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US / Z8

Sikaflex®-252

Revision Date 10/31/2023 Print Date 10/31/2023

SECTION 1. IDENTIFICATION

Product name	:	Sikaflex®-252
Company name	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: +1-703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory sensitization	:	Category 1
Skin sensitization	:	Category 1
Specific target organ toxicity - repeated exposure (Inhalation)	:	Category 2

GHS label elements

Hazard pictograms :



Signal Word	:	Danger
Hazard Statements	:	H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

FRS SDS Reference Library | S128 | Library page 1288

Precautionary Statements :

Prevention:

P260 Do not breathe mist or vapors.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
P284 Wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

Other hazards

Intentional misuse by deliberate concentration and inhalation of vapor may be harmful or fatal.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
xylene	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304	>= 1 - < 5
ethylbenzene	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 Asp. Tox. 1; H304 Eye Irrit. 2A; H319	>= 0.1 - < 1

4,4'-methylenediphenyl diisocyanate	101-68-8	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2B; H320 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	>= 0.1 - < 1
Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane	Not Assigned	Skin Sens. 1A; H317	>= 0.1 - < 1
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	Acute Tox. 1; H330 Skin Corr. 1C; H314 Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335	>= 0.1 - < 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

Most important symptoms and effects, both acute and delayed : sensitizing effects
Asthmatic appearance
Allergic reactions
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause damage to organs through prolonged or repeated exposure if inhaled.

Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Deny access to unprotected persons.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Follow standard hygiene measures when handling chemical products.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place.

Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
xylene	1330-20-7	TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	20 ppm	ACGIH
		STEL	150 ppm 655 mg/m3	OSHA P0
		TWA	100 ppm 435 mg/m3	OSHA P0
ethylbenzene	100-41-4	TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm 435 mg/m3	OSHA P0
		STEL	125 ppm 545 mg/m3	OSHA P0
		TWA	20 ppm	ACGIH
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0.005 ppm	ACGIH
		C	0.02 ppm 0.2 mg/m3	OSHA Z-1
		C	0.02 ppm 0.2 mg/m3	OSHA P0
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	TWA	0.005 ppm	OSHA P0
		STEL	0.02 ppm	OSHA P0

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration

		(gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Color	:	various
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available

Vapor pressure	:	0.01 hpa
Relative vapor density	:	No data available
Density	:	ca. 1.2 g/cm3 (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm2/s (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Volatile organic compounds (VOC) content	:	50 g/l

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Components:

xylene:

Acute oral toxicity	:	LD50 Oral (Rat): 3,523 mg/kg

ethylbenzene:

Acute oral toxicity	:	LD50 Oral (Rat): 3,500 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 5,510 mg/kg

4,4'-methylenediphenyl diisocyanate:

Acute oral toxicity	:	LD50 Oral (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgment

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Acute oral toxicity	:	LD50 Oral (Rat): 4,814 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.031 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 Dermal (Rat): > 7,000 mg/kg

Skin corrosion/irritation

Not classified due to lack of data.

Serious eye damage/eye irritation

Not classified due to lack of data.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.

IARC	Group 2B: Possibly carcinogenic to humans Titanium dioxide (> 10 µm) Group 2B: Possibly carcinogenic to humans	13463-67-7

	Carbon black Group 2B: Possibly carcinogenic to humans	1333-86-4
	ethylbenzene	100-41-4

OSHA Not applicable

NTP Not applicable

Reproductive toxicity
Not classified due to lack of data.

STOT-single exposure
Not classified due to lack of data.

STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure if inhaled.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity
Not classified due to lack of data.

Further information

Product:

Remarks : Carbon black (1333-86-4)
Animal Toxicity:
Rat, oral, duration 2 year
Effect: no tumors

Mouse, oral, duration 2 years
Effect: no tumors
Mouse, dermal, duration 18 months
Effect: no skin tumors
Rat, inhalation, duration 2 years
Target organ: lungs
Effect: inflammation, fibrosis, tumors
Note: Tumors in the rat lung are considered to be related to the "particle overload phenomenon" rather than to a specific chemical effect of carbon black itself in the lung. These effects in rats have been reported in many studies on other poorly soluble inorganic particles and appear to be rat specific. Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions.
Mortality studies (human data): A study on carbon black production workers in the UK (Sorahan, 2001) found an increased risk of lung cancer in two of the five plant studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant (Morfeld, 2006; Buechte, 2006) found a similar increase in lung cancer risk

but, like the Sorohan, 2001 (UK study) found no association with carbon black exposure. A large US study of 18 plants showed a reduction in lung cancer risk in carbon black production workers (DEII, 2006). Based upon these studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evidence for carcinogenicity was inadequate (IARC, 2010).
Since the IARC evaluation of carbon black, Sorahan and Harrington (2007) have re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney (2009) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington.
Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated.
IARC CANCER CLASSIFICATION: In 2006 IARC re-affirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in experimental animal studies for the carcinogenicity of carbon black. IARC's overall evaluation is that carbon black is "possibly carcinogenic to humans" (Group 2B)". This conclusion was based on IARC's guidelines, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC, 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was "sufficient evidence" that carbon black extracts can cause cancer in animals (Group 2B).
ICGIH CANCER CLASSIFICATION: Confirmed Animal Carcinogen with Unknown Relevance to Humans (Category A3 Carcinogen).

ASSESSMENT: Applying the guidelines of self-classification under the Globally Harmonized System of Classification and Labeling of Chemicals, carbon black is not classified as a carcinogen. Lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rats tumors are a result of a secondary non-genotoxic mechanism that has questionable relevance for classification in humans. In support of this opinion, the CLP Guidance for Specific Target Organ Toxicity - Repeated Exposure (STOT-RE), cites lung overload under mechanisms not relevant to humans. Human health studies show that exposure to carbon black does not increase

the risk to carcinogenicity.

Titanium dioxide (13463-67-7)
In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiological studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

xylene:

Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l Exposure time: 56 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia): 1.17 mg/l Exposure time: 7 d

Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane:

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Persistence and degradability

No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects

Product:

Additional ecological information	:	Do not empty into drains; dispose of this material and its container in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA list	:	All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)
xylene	1330-20-7	100

SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

xylene	1330-20-7	>= 1 - < 5 %
ethylbenzene	100-41-4	>= 0.1 - < 1 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

xylene	1330-20-7	>= 1 - < 5 %

California Prop. 65

⚠ **WARNING:** This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer, and 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA P0 / C	:	Ceiling limit
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-1 / C	:	Ceiling

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor

does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 10/31/2023

100000004585
US / Z8

Sikaflex®-521 UV

Revision Date 09/21/2023 Print Date 09/21/2023

SECTION 1. IDENTIFICATION

Product name	:	Sikaflex®-521 UV
Company name	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: +1-703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	Asp. Tox. 1; H304	>= 1 - < 5

Actual concentration is withheld as a trade secret

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SECTION 4. FIRST AID MEASURES

General advice	:	No hazards which require special first aid measures.
If inhaled	:	Move to fresh air.
In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	No known significant effects or hazards. No information available.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions	:	Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.

Advice on safe handling	:	For personal protection see section 8. No special handling advice required. Follow standard hygiene measures when handling chemical products.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Store in accordance with local regulations.
Materials to avoid	:	No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
methanol	67-56-1	TWA	200 ppm 260 mg/m3	OSHA Z-1
		STEL	250 ppm 325 mg/m3	OSHA P0
		TWA	200 ppm 260 mg/m3	OSHA P0

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should

be used when a risk assessment indicates this is necessary.

Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	:	Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Color	:	various
Odor	:	slight
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 214 °F / > 101 °C (Method: closed cup)
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	0.01 hpa
Relative vapor density	:	No data available
Density	:	ca. 1.40 g/cm3 (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available

Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Volatile organic compounds (VOC) content	:	14.4 g/l

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Not classified due to lack of data.

Skin corrosion/irritation

Not classified due to lack of data.

Serious eye damage/eye irritation

Not classified due to lack of data.

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.

IARC	Group 2B: Possibly carcinogenic to humans titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	13463-67-7
OSHA	Not applicable	
NTP	Not applicable	

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

Not classified due to lack of data.

STOT-repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

Further information

Product:

Remarks : Titanium dioxide (13463-67-7)
In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiological studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	Do not empty into drains; dispose of this material and its container in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA list	:	All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

manganese-ferrite-black-spinel	68186-94-7	>= 1 - < 5 %

California Prop. 65

⚠ **WARNING:** This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer, and 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

Notes to Reader

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Sikaflex®-521 UV

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Revision Date 09/21/2023

000000105772
US / Z8

Safety Data Sheet
acc. to OSHA HCS

Printing Date 10/02/2018 Revision Number 12 Revision Date 10/02/2018

*
1 Identification

· **Product identifier**

· **Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)**

· **Article number:** 06328
· **Relevant identified uses of the substance or mixture.**
Adhesive
Sealant
· **Application of the substance / the mixture** Sealant

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Royal Adhesives And Sealants, LLC
2001 W. Washington Street
South Bend IN 46628-2023
Information Phone Number: 574-246-5000

· **Information department:** Global Regulatory Department.
· **Emergency telephone number:**
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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Safety Data Sheet
acc. to OSHA HCS

Printing Date 10/02/2018 *Revision Number 12* *Revision Date 10/02/2018*

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 1)

· ***Hazard pictograms***



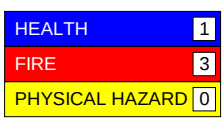
GHS02 GHS07 GHS08

· ***Signal word*** *Danger*
· ***Hazard statements***
Highly flammable liquid and vapor.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
· ***Precautionary statements***
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor.
Specific treatment (see on this label).
Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
Call a poison center/doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· ***Classification system:***
· ***NFPA ratings (scale 0 - 4)***



Health = 1
Fire = 3
Reactivity = 0

· ***HMIS-ratings (scale 0 - 4)***



Health = 1
Fire = 3
Physical Hazard = 0

(Contd. on page 3)

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 2)

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

*
3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture

· **Hazardous components:**		
108-88-3	toluene	25-50%
	hydrocarbon resin	5-20%
13463-67-7	titanium dioxide	2.5-10%
1309-48-4	magnesium oxide	≤2.5%

*
4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse mouth with water.
Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

*
5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray.
Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
· **Protective equipment:** Protective clothing and respiratory protective device.

*
6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

(Contd. on page 4)

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 3)

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste in accordance with federal state and local regulations.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
108-88-3	toluene	67 ppm
1309-48-4	magnesium oxide	30 mg/m³

· **PAC-2:**		
108-88-3	toluene	560 ppm
1309-48-4	magnesium oxide	120 mg/m³

· **PAC-3:**		
108-88-3	toluene	3700* ppm
1309-48-4	magnesium oxide	730 mg/m³

*
7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Keep container closed when not in use.
Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location away from direct heat.
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

*
8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

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acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 4)

108-88-3 toluene	
PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m³, 150 ppm Long-term value: 375 mg/m³, 100 ppm
TLV	Long-term value: 75 mg/m³, 20 ppm BEI
13463-67-7 titanium dioxide	
PEL	Long-term value: 15* mg/m³ *total dust
REL	See Pocket Guide App. A
TLV	Long-term value: 10 mg/m³
1309-48-4 magnesium oxide	
PEL	Long-term value: 15* mg/m³ fume; *total particulate
TLV	Long-term value: 10* mg/m³ *as inhalable fraction

· **Ingredients with biological limit values:**

108-88-3 toluene	
BEI	0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene 0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene 0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment (see listings below)**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
· **Breathing equipment:**
Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
· **Protection of hands:**



Protective gloves

(Contd. on page 6)

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 5)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**
Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**
Safety glasses with side shields.



Tightly sealed goggles

· **Body protection:** Protective work clothing

*
9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Viscous paste
Color:	White
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point:	Undetermined.
Boiling point:	111 °C (231.8 °F)
· **Flash point:**	7 °C (44.6 °F)
· **Ignition temperature:**	535.0 °C (995 °F)
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Flammable limits:**	
Lower:	1.2 Vol %
Upper:	7.0 Vol %
· **Vapor pressure at 20 °C (68 °F):**	29.0 hPa (21.8 mm Hg)
· **Specific gravity:**	1.060
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	N/D

(Contd. on page 7)

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 6)

· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	45-55 %
Solids content:	53 %
· **Other information**	"NOTICE: This product does not comply with the requirements of Rule 1168 of California's South Coast Air Quality Management District". VOC: = 4.42 lbs/gal WEIGHT PER GALLON: = 8.95 Lbs.

*
10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** Heat, flames, sparks.
· **Incompatible materials:** Reacts with oxidizing agents.
· **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrogen chloride (HCl)
Hydrocarbons

*
11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
108-88-3 toluene		
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/l (mouse)

· **Primary irritant effect:**
· **on the skin:** Skin irritant.
· **on the eye:**
May irritate the eye.
Vapors may be irritating to the eyes.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
Harmful

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
108-88-3	toluene	3
9010-98-4	Polychloroprene Polymer	3

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 7)

13463-67-7	titanium dioxide	2B

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

*
12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** At present there are no ecotoxicological assessments.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

*
13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Must be specially treated adhering to official regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

*
14 Transport information

· **UN-Number**
· **DOT, IMDG, IATA** UN1133

· **UN proper shipping name**
· **DOT** Adhesives
· **IMDG, IATA** ADHESIVES

· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 8)

· **Label**	3
· **IMDG, IATA**	



· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	UN 1133 ADHESIVES, 3, II

*
15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

108-88-3	toluene

· **TSCA (Toxic Substances Control Act):**
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

108-88-3	toluene

· **(DSL) Canada Dosmestic Substance List**
All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **New Jersey Right-to-Know List:**

108-88-3	toluene
13463-67-7	titanium dioxide

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 9)

1309-48-4	magnesium oxide

· **New Jersey Special Hazardous Substance List:**

108-88-3	toluene	TE, F3

· **Pennsylvania Right-to-Know List:**

108-88-3	toluene
13463-67-7	titanium dioxide
1309-48-4	magnesium oxide

· **Pennsylvania Special Hazardous Substance List:**

108-88-3	toluene	E

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

108-88-3	toluene	II

· **TLV (Threshold Limit Value established by ACGIH)**

108-88-3	toluene	A4
13463-67-7	titanium dioxide	A4
1309-48-4	magnesium oxide	A4

· **MAK (German Maximum Workplace Concentration)**

13463-67-7	titanium dioxide	3A

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:** Global Regulatory Department.
· **Creation Date:** 10/02/2018
· **Date of preparation / last revision** 10/02/2018 / 11
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent

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Safety Data Sheet
acc. to OSHA HCS

Trade name: 06328 (M6328 SILAPRENE ADHESIVE SEALANT)

(Contd. of page 10)

LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1

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SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION:

Product name: SILICONE SEALANT- COLORS
Product Code(s): KK0201 (aluminum), KK0202, KK0202-B & KK0309 (black), KK0207
Recommended use: (white) Silicone Sealant and Adhesive
Restrictions on use: No further information available

Manufacturer:
Imperial Manufacturing Group Inc.
40 Industrial Park Street
Richibucto, NB, Canada
E4W 4A4
Tel: (905)-829-5888
www.imperialgroup.ca

Emergency telephone: (24 hours) Canutec (613) 996-6666 (Collect)

SECTION 2 – HAZARDS INDENTIFICATION:

GHS Classification:
Eye irritation – Category 2B
Skin irritation – Category 2
Skin sensitization – Category 1B
Carcinogenicity – Category 2

GHS Label elements:

Hazard symbols:



Signal word: Warning

Hazard statements:
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes eye irritation
H351 Suspected of causing cancer

Precautionary statements:

Prevention:
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust, fume or vapors.
P262 Do not get in eyes, on skin or on clothing.
P264 Wash hands and other skin areas thoroughly after handling
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response :
P302+P352+P333+P313 If on skin, wash with plenty of soap and water.If skin irritation or rash occurs, get medical attention.
P305+P351+P338 If in eyes, rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313 If exposed or concerned: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash it before reuse.

Storage:
P405+P403 Store locked up. Store in a well-ventilated place.

Disposal:
P501 Dispose of contents and container in accordance with applicable local, regional, national and international regulations.

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Other hazards: None known

Supplemental information: 95% of the mixture consists of component(s) of unknown acute inhalation toxicity.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS:

Substance/Mixture: Mixture

Chemical Name	CAS No.	Concentration (%)
Silicone Dioxide	7631-86-9	5.0 – 10.0
Distillates (Petroleum), Hydrotreated Middle	64742-46-7	5.0 – 10.0
Pigmented sealants may contain:		
Carbon Black	1333-86-4	0.1 – 1.0
Titanium Dioxide	13463-67-7	0.1 – 1.0
Pigment Blue 15	147-14-8	1.0 – 5.0
Iron Oxide	1309-37-1	1.0 – 5.0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

SECTION 4 - FIRST AID MEASURES:

Eye contact: Flush with copious quantities of lukewarm water for at least 15 minutes. Do not attempt to physically remove the solids or gums from the eye. Seek medical attention immediately if irritation persists.

Skin contact: Remove contaminated clothing. Wash thoroughly with warm water and non-abrasive soap. Seek medical attention if you feel ill or a reaction develops.

Inhalation: Remove to fresh air and provide water. Seek medical attention if you feel ill or a reaction develops.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms/effects, acute and delayed: None known.

Indication of immediate medical attention and special treament needed: Provide general supportive measures and treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES:

Suitable extinguishing media: Carbon dioxide, dry chemical, water fog or foam. Water can be used to cool fire exposed containers.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Exposure to combustion products such as carbon oxides, silicone oxides and formaldehyde may be hazard to health.

Special protective equipment and precautions for fire fighters: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.

SECTION 6 – ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures: Follow safe handling advice and personal protective equipment recommenation in Section 8.

Environment precautions: Discharged into the environment must be avoided. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Restrict access to the area of the spill. Provide ventilation, NIOSH/MHSA approved respirator and protective clothing. Scrape up sealant and place in

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container for disposal. Clean area as appropriate since silicone materials can represent a slip hazard. Cleaning may require steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state, provincial, federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup.

SECTION 7 – HANDLING AND STORAGE:

Precautions for safe handling: Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage, including any incompatibilities: Store in an adequately ventilated area under dry conditions between 50°F (10°C) to 77°F (25°C) and keep container tightly sealed when not in use. Do not store with strong oxidizing agents.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION:

Control Parameters:

Ingredient	CAS No.	Value Type (form of exposure)	Control parameters/ Permissible concentration	Basis
Silicone Dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m^3/%SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m^3 (Silica)	NIOSH REL
Distillates (Petroleum), Hydrotreated Middle	64742-46-7	TWA (Mist)	5 mg/m^3	OSHA Z-1
		TWA (Mist)	5 mg/m^3	OSHA P0
		TWA (Mist)	5 mg/m^3	NIOSH REL
		ST (Mist)	10 mg/m^3	NIOSH REL
Carbon Black	1333-86-4	TWA	3.5 mg/m^3	NIOSH REL
		TWA	3.5 mg/m^3	OSHA Z-1
		TWA (Inhalable fraction)	3 mg/m^3	ACGIH
Titanium Dioxide	13463-67-7	TWA	15 mg/m^3	OSHA PEL
		TWA	10 mg/m^3	ACGIH TLV
Iron Oxide	1309-37-1	TWA	10 mg/m^3	OSHA PEL
		TWA (Respirable fraction)	5 mg/m^3	ACGIH TLV
Pigment Blue 15	147-14-8	TWA	1 mg/m^3	OSHA PEL
		TWA	1 mg/m^3	ACGIH TLV

Engineering controls: Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations. Use respiratory protection unless local exhaust ventilation is provided or exposures are within guidelines.

Personal protective equipment: Safety glasses with side-protection, impermeable gloves (e.g., neoprene, nitrile, silver shield (R)), coveralls or apron are important in preventing contamination of eyes, skin and clothing. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Paste, thixotropic sealant
Odor:	Acetic acid
Odor threshold:	Not available
pH (ASTM D1293):	3.2
Melting point/Freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	>212°F (100°C) Closed Cup Method
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not classified as a flammability hazard
Upper flammability or explosion limit:	Not available
Lower flammability or explosion limit:	Not available
Vapor pressure:	Not applicable
Vapor density:	Not available
Specific gravity:	1.01
Solubility:	Not available
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not applicable
Acid Reserve, g NaOH/100 g (CCCR 2001, Sections 43 and 44):	0.17
Volatile Organic Content:	30 grams per liter, <3% by weight (Chemically Curing Sealants and Caulks – CARB Method 310: VOC less water, less exempt compounds and LVP-VOCs).

SECTION 10 – STABILITY AND REACTIVITY:

Reactivity:	Not classified as a reactivity hazard.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Use at elevated temperatures may form highly hazardous compounds. At above 150°C (300°F) in the presence of air, trace quantities of formaldehyde may be released. Acetic acid is formed upon contact with water or humid air.
Conditions to avoid:	Moisture and incompatible materials.
Incompatible materials:	Strong oxidizing agents or electrophiles (e.g. ferric chloride). Concentrated acids or bases can degrade the silicone polymer.
Hazardous decomposition products:	Carbon oxides, silicone dioxide, metal oxides, formaldehyde and traces of incompletely burned carbon products.

SECTION 11 - TOXICOLOGICAL INFORMATION:

Information on the likely routes of exposure:

Inhalation:	Prolonged inhalation may be harmful.
Ingestion:	May be harmful if swallowed.
Skin contact:	May cause an allergic skin reaction.
Eye contact:	May cause eye irritation on direct contact.

Symptoms related to the physical, chemical and toxicological characteristics:

May cause an allergic skin reaction. Suspected of causing cancer. Although the carbon black (CAS# 1333-86-4) is encapsulated by the silicone sealant, prolonged overexposure to carbon black dust causes lung fibrosis. Although the titanium dioxide (CAS# 13463-67-7) is encapsulated by the silicone sealant, prolonged overexposure to titanium dioxide dust causes tightness pain in the chest, coughing and difficulty breathing.

Acute toxicity:

Silicone Dioxide (CAS# 7631-86-9):
LD50 (Oral-Rat): >3300 mg/kg
LC50 (Inhalation-Rat): >2.08 mg/L (4 hrs.)
LD50 (Dermal-Rabbit): >5000 mg/kg

Distillates(Petroleum), Hydrotreated Middle (CAS# 64742-46-7):
LD50 (Oral-Rat): >5000mg/kg
LC50 (Inhalation-Rat): 1.78 mg/L (4 hrs.)
LD50 (Dermal-Rat): >2000 mg/kg.

Carbon Black (CAS# 1333-86-4):
LD50 (Oral-Rat): 14,400mg/kg.

Titanium Dioxide (CAS# 13463-67-7):
LD50 (Oral-Rat): 24,000 mg/kg

Pigment Blue 15 (CAS# 147-14-8):
LD50 (Oral-Rat): >10,000mg/kg.

Skin corrosion/irritation: May cause skin irritation.
Serious eye damage/irritation: May cause eye irritation.
Aspiration hazard: Not classified based on available information.
Distillates (petroleum), hydrotreated middle (CAS# 64742-46-7) is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.
Specific target organ toxicity - single exposure: Not classified based on available information.
Specific target organ toxicity – repeated exposure: Not classified based on available information.
Respiratory or skin sensitization: Not classified based on available information.

Carcinogenicity: No ingredients considered by IARC, NTP or OSHA to be carcinogens except in the pigmented sealants which may contain:
Carbon Black (CAS# 1333-86-4):
IARC Group 2B – possibly carcinogenic to humans.
Titanium Dioxide (CAS# 13463-67-7):
IARC Group 2B – possibly carcinogenic to humans.

Reproductive toxicity: Not classified based on available information.
Teratogenicity: Not classified based on available information.
Germ cell mutagenicity: Not classified based on available information.

SECTION 12 – ECOLOGICAL INFORMATION:

Ecotoxicity: No data available.
Persistence and degradability: No data available.
Bioaccumulated potential: No data available.
Mobility in soil: No data available.
Other adverse effects: No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS:

Disposal instructions: This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local, regional,national and international regulations.
Waste from residues: Dispose of in accordance with local regulations.
Contaminated packaging: Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14 - TRANSPORT INFORMATION:

Shipping Information: Not subject to DOT, TDG, IMDG Code or IATA Regulations.

SECTION 15 - REGULATORY INFORMATION:

EPCRA – Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity:

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Ingredients	CAS No.	Component RQ (lbs)	Calculated product RQ (lbs)
Acetic acid	64-19-7	5000	*
Acetic anhydride	108-24-7	5000	*

* Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity:
This product does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: No SARA hazards.
SARA 302: No chemicals in this product are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313: This product does not contain any chemical components with known CAS No. that exceed the threshold reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know:

Dimethyl siloxane, hydroxy-terminated	70131-67-8	70 – 90%
Silicone dioxide	7631-86-9	5 – 10%
Distillates (petroleum), hydrotreated middle	64742-46-7	5 – 10%
Acetic acid	64-19-7	0 – 0.1%
Acetic anhydride	108-24-7	0 – 0.1%
Carbon black	1333-86-4	0.1 – 1%
Titanium dioxide	13463-67-7	0.1 – 1%
Pigment blue 15	147-14-8	1 – 5%
Iron oxide	1309-37-1	1 – 5%

New Jersey Right To Know:

Dimethyl siloxane, hydroxy-terminated	70131-67-8	70 – 90%
Silicone dioxide	7631-86-9	5 – 10%
Distillates (petroleum), hydrotreated middle	64742-46-7	5 – 10%
Carbon black	1333-86-4	0.1 – 1%
Titanium dioxide	13463-67-7	0.1 – 1%
Pigment blue 15	147-14-8	1 – 5%
Iron oxide	1309-37-1	1 – 5%

California Proposition 65: This product contains trace amount of substances, in the form of airborne or unbound particles, known to the State of California to cause cancer or other reproductive harm:
Carbon Black (CAS# 1333-86-4) and Titanium Dioxide (CAS# 13463-67-7)

The ingredients of this product are reported in the following inventories:

TSCA: All chemical substances in this product are included on or exempted from listing on the TSCA inventory of Chemical Substances.

DSL: All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempted from listing on the Canadian Domestic Substances List (DSL).

NFPA Profile: Health 1, Flammability 1, Reactivity 0

SECTION 16 - OTHER INFORMATION:

Prepared by: Imperial Manufacturing Group Inc.
Revision date: March 2, 2020

Notice to the Reader: The information is provided in good faith and is correct to the best of Imperial Manufacturing Group Inc.'s knowledge as of the date hereof and is designed to assist our customers; however Imperial Manufacturing Group Inc. makes no representation as to its completeness or accuracy. Final determination of suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Imperial Manufacturing Group Inc. disclaims all expressed or implied warranties or representations.

Section 1: IDENTIFICATION

Product Name: Simple Green® Industrial Cleaner & Degreaser
Additional Names:

Manufacturer's Part Number: **Please refer to Section 16*

Recommended Use: Cleaner & Degreaser for water tolerant surfaces.
Restrictions on Use: Do not use on non-rinsable surfaces.

Company: Sunshine Makers, Inc.
15922 Pacific Coast Highway
Huntington Beach, CA 92649 USA
Telephone: 800-228-0709 ● 562-795-6000 *Mon – Fri, 8am – 5pm PST*
Fax: 562-592-3830
Email: info@simplegreen.com
Emergency Phone: Chem-Tel 24-Hour Emergency Service: 800-255-3924

Section 2: HAZARDS IDENTIFICATION

This product is not classified as hazardous under 2012 OSHA Hazard Communication Standards (29 CFR 1910.1200).

OSHA HCS 2012
Label Elements
Signal Word: None **Hazard Symbol(s)/Pictogram(s):** None required

Hazard Statements: None
Precautionary Statements: None
Hazards Not Otherwise Classified (HNOC): None
Other Information: None Known

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent Range
Water	7732-18-5	> 84.998%*
Ethoxylated Alcohol	68439-46-3	< 5%*
Sodium Citrate	68-04-2	< 5%*
Tetrasodium *N,N*-bis(carboxymethyl)-L-glutamate	51981-21-6	< 1%*
Sodium Carbonate	497-19-8	< 1%*
Citric Acid	77-92-9	< 1%*
Isothiazolinone mixture	55965-84-9	0.002%
Fragrance	Proprietary Mixture	< 1%*
Colorant	Proprietary Mixture	< 1%*

**specific percentages of composition are being withheld as a trade secret*

Section 4: FIRST-AID MEASURES

Inhalation: Not expected to cause respiratory irritation. If adverse effect occurs, move to fresh air.
Skin Contact: Not expected to cause skin irritation. If adverse effect occurs, rinse skin with water.
Eye Contact: Not expected to cause eye irritation. If adverse effect occurs, flush eyes with water.
Ingestion: May cause upset stomach. Drink plenty of water to dilute. See section 11.

Most Important Symptoms/Effects, Acute and Delayed: None known.

Indication of Immediate Medical Attention and Special Treatment Needed, if necessary: Treat symptomatically

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Section 5: FIRE-FIGHTING MEASURES

Suitable & Unsuitable Extinguishing Media: Use Dry chemical, CO2, water spray or "alcohol" foam. Avoid high volume jet water.
Specific Hazards Arising from Chemical: In event of fire, fire created carbon oxides may be formed.
Special Protective Actions for Fire-Fighters: Wear positive pressure self-contained breathing apparatus; Wear full protective clothing.

This product is non-flammable. See Section 9 for Physical Properties.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: *For non-emergency and emergency personnel:* See section 8 – personal protection. Avoid eye contact. Safety goggles suggested.

Environmental Precautions: Do not allow into open waterways and ground water systems.

Methods and Materials for Containment and Clean Up: Dike or soak up with inert absorbent material. See section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling: Ensure adequate ventilation. Keep out of reach of children. Keep away from heat, sparks, open flame and direct sunlight. Do not pierce any part of the container. Do not mix or contaminate with any other chemical. Do not eat, drink or smoke while using this product.

Conditions for Safe Storage including Incompatibilities: Keep container tightly closed. Keep in cool dry area. Avoid prolonged exposure to sunlight. Do not store at temperatures above 109°F (42.7°C). If separation occurs, mix the product for reconstitution.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values: No components listed with TWA or STEL values under OSHA or ACGIH.

Appropriate Engineering Controls: Showers, eyewash stations, ventilation systems

Individual Protection Measures / Personal Protective Equipment (PPE)
Eye Contact: Use protective glasses or safety goggles if splashing or spray-back is likely.
Respiratory: Use in well ventilated areas or local exhaust ventilations when cleaning small spaces.
Skin Contact: Use protective gloves (any material) when used for prolonged periods or dermally sensitive.
General Hygiene Considerations: Wash thoroughly after handling and before eating or drinking.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green Liquid
Odor: Added sassafras odor
Odor Threshold: Not determined
pH ASTM D-1293**:** 8.5 – 9.5
Freezing Point ASTM D-1177**:** 0-3.33°C (32-38°F)
Boiling Point & Range ASTM D-1120**:** 101°C (213.8°F)
Flash Point ASTM D-93**:** > 212°F
Evaporation Rate ASTM D-1901**:** ½ Butyl Acetate @ 25°C
Flammability (solid, gas): Not applicable
Upper/Lower Flammability or Explosive Limits: Not applicable
Vapor Pressure ASTM D-323**:** 0.60 PSI @77°F, 2.05 PSI @100°F
Vapor Density: Not determined

Partition Coefficient: n-octanol/water: Not determined
Autoignition Temperature: Non-flammable
Decomposition Temperature: 109°F
Viscosity: Like water
Specific Gravity ASTM D-891**:** 1.01 – 1.03
VOCs: ***Water & fragrance exemption in calculation*

SCAQMD 304-91 / EPA 24:	0 g/L	0 lb/gal	0%
CARB Method 310**:	2.5 g/L	0.021 lb/gal	0.25%
SCAQMD Method 313:	Not tested		

VOC Composite Partial Pressure: Not determined
Relative Density ASTM D-4017**:** 8.34 – 8.42 lb/gal
Solubility: 100% in water

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Section 10: STABILITY AND REACTIVITY

Reactivity: Non-reactive.
Chemical Stability: Stable under normal conditions 70°F (21°C) and 14.7 psig (760 mmHg).
Possibility of Hazardous Reactions: None known.
Conditions to Avoid: Excessive heat or cold.
Incompatible Materials: Do not mix with oxidizers, acids, bathroom cleaners, or disinfecting agents.
Hazardous Decomposition Products: Normal products of combustion - CO, CO2.

Section 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:
Inhalation - Overexposure may cause headache.
Skin Contact - Not expected to cause irritation, repeated contact may cause dry skin.
Eye Contact - Not expected to cause irritation.
Ingestion - May cause upset stomach.

Symptoms related to the physical, chemical and toxicological characteristics: no symptoms expected under typical use conditions.
Delayed and immediate effects and or chronic effects from short term exposure: no symptoms expected under typical use conditions.
Delayed and immediate effects and or chronic effects from long term exposure: headache, dry skin, or skin irritation may occur.
Interactive effects: Not known.

Numerical Measures of Toxicity

Acute Toxicity:
Oral LD_{50} (rat) > 5 g/kg body weight
Dermal LD_{50} (rabbit) > 5 g/kg body weight
Calculated via OSHA HCS 2012 / Globally Harmonized System of Classification and Labelling of Chemicals

Skin Corrosion/Irritation: Non-irritant per Dermal Irritection® assay modeling. No animal testing performed.
Eye Damage/Irritation: Minimal irritant per Ocular Irritection® assay modeling. No animal testing performed.
Germ Cell Mutagenicity: Mixture does not classify under this category.
Carcinogenicity: No ingredients trigger or classify under this category under NTP, IARC or OSHA.
Reproductive Toxicity: Mixture does not classify under this category.
STOT-Single Exposure: Mixture does not classify under this category.
STOT-Repeated Exposure: Mixture does not classify under this category.
Aspiration Hazard: Mixture does not classify under this category.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Volume of ingredients used does not trigger toxicity classifications under the Globally Harmonized System of Classification and Labelling of Chemicals.
Aquatic: Aquatic Toxicity - Low, based on OECD 201, 202, 203 + Microtox: EC_{50} & IC_{50} ≥100 mg/L. Volume of ingredients used does not trigger toxicity classifications under the Globally Harmonized System of Classification and Labelling of Chemicals.
Terrestrial: Not tested on finished formulation.

Persistence and Degradability: Readily Biodegradable per OCED 301D, Closed Bottle Test
Bioaccumulative Potential: No data available.
Mobility in Soil: No data available.
Other Adverse Effects: No data available.

Section 13: DISPOSAL CONSIDERATIONS

Unused or Used Liquid: May be considered hazardous in your area depending on usage and tonnage of disposal – check with local, regional, and or national regulations for appropriate methods of disposal.

Empty Containers: May be offered for recycling.

Never dispose of used degreasing rinsates into lakes, streams, and open bodies of water or storm drains.

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Section 14: TRANSPORT INFORMATION

U.N. Number: Not applicable
U.N. Proper Shipping Name: Cleaning Compound, Liquid NOI
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Marine Pollutant - NO
Transport in Bulk (according to Annex II of MARPOL 73/78 and IBC Code): Unknown.
Special precautions which user needs to be aware of/comply with, in connection with transport or conveyance either within or outside their premises: None known.

U.S. (DOT) / Canadian TDG: Not Regulated for shipping.
ICAO/ IATA: Not classified as Hazardous
IMO / IDMG: Not classified as Hazardous
ADR/RID: Not classified as Hazardous

Section 15: REGULATORY INFORMATION

All components are listed on: TSCA and DSL Inventory.

SARA Title III: Sections 311/312 Hazard Categories – Not applicable.
Sections 313 Superfunds Amendments and Reauthorizations Act of 1986 – Not applicable.
Sections 302 – Not applicable.

Clean Air Act (CAA): Not applicable
Clean Water Act (CWA): Not applicable

State Right To Know Lists: No ingredients listed
California Proposition 65: No ingredients listed
Texas ESL:

Ethoxylated Alcohol	68439-46-3	60 µg/m³ long term	600 µg/m³ short term
Sodium Citrate	68-04-2	5 µg/m³ long term	50 µg/m³ short term
Sodium Carbonate	497-19-8	5 µg/m³ long term	50 µg/m³ short term
Citric Acid	77-92-9	10 µg/m³ long term	100 µg/m³ short term

Section 16: OTHER INFORMATION

Size	UPC	Size	UPC
22 oz. Trigger	043318130229	2.5 Gallon	043318000041
24 oz. Trigger	043318000034	5 Gallon	043318000010
32 oz.	043318130328	55 Gallon	043318000027
1 Gallon	043318000003	15 Gallon	043318000225
1 Gallon w/ Dilution Bottle	043318001253	260 Gallon	043318130663
1 Gallon w/ Dilution Bottle	043318480416	275 Gallon	043318000102
1 Gallon w/ Dilution Bottle	043318000003		

USA items listed only. Not all items listed. USA items may not be valid for international sale.

NFPA:
Health – None
Flammability – Non-flammable
Stability – Stable
Special - None



Acronyms

NTP	National Toxicology Program	IARC	International Agency for Research on Cancer
OSHA	Occupational Safety and Health Administration	CPSC	Consumer Product Safety Commission
TSCA	Toxic Substances Control Act	DSL	Domestic Substances List

Prepared / Revised By: Sunshine Makers, Inc., Regulatory Department.
This SDS has been revised in the following sections: Exact Isothiazolinone amount disclosed

DISCLAIMER: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

1. Identification

Product number	17-0607A
Product identifier	**NON-CHLORINATED BRAKE CLEANER**
Revision date	05-23-2018
Company information	SPRAYWAY INC. 1000 Integram Dr Pacific, MO 63069 United States
Company phone	1-630-628-3000
Emergency telephone US	1-866-836-8855
Emergency telephone outside US	1-952-852-4646
Version #	02
Supersedes date	04-24-2017
Recommended use	CLEANER
Recommended restrictions	None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 3
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Reproductive toxicity (fertility, the unborn child)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Toxic if swallowed. May be fatal if swallowed and enters airways. Toxic in contact with skin. Causes skin irritation. Harmful if inhaled. May cause drowsiness or dizziness. Suspected of damaging the unborn child. Suspected of damaging fertility. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe gas. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse.

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Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Environmental hazards	Hazardous to the aquatic environment, acute hazard — Category 2 Hazardous to the aquatic environment, long-term hazard — Category 2
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Methanol		67-56-1	20 - 40
Naphtha, (Petroleum), Hydrotreated Light		64742-49-0	20 - 40
n-Heptane		142-82-5	10 - 20
Acetone		67-64-1	2.5 - 10
Carbon Dioxide		124-38-9	2.5 - 10
Toluene		108-88-3	2.5 - 10
Methylcyclohexane		108-87-2	1 - 2.5
Other components below reportable levels			0.1 - 1

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewer, basements or confined areas. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Do not breathe gas. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 2 Aerosol. Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3 5000 ppm
Methanol (CAS 67-56-1)	PEL	260 mg/m3 200 ppm
Methylcyclohexane (CAS 108-87-2)	PEL	2000 mg/m3 500 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
		500 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm
Methylcyclohexane (CAS 108-87-2)	TWA	400 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm
Methanol (CAS 67-56-1)	STEL	325 mg/m3
		250 ppm
	TWA	260 mg/m3
		200 ppm
Methylcyclohexane (CAS 108-87-2)	TWA	1600 mg/m3
		400 ppm
n-Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
Toluene (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
Methanol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Methanol (CAS 67-56-1)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Methanol (CAS 67-56-1)	Skin designation applies.
Toluene (CAS 108-88-3)	Skin designation applies.

US - Tennessee OELs: Skin designation

Methanol (CAS 67-56-1)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Methanol (CAS 67-56-1)	Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Methanol (CAS 67-56-1)	Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Aerosol.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 174.57 °F (79.21 °C) estimated

Flash point 29.3 °F (-1.5 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 3.3 % estimated

Flammability limit - upper (%) 18.9 % estimated

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 75 - 95 psig @70F estimated
120 - 140 psig @130F estimated

Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.806 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Aluminum.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Toxic in contact with skin. Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Toxic if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. Toxic in contact with skin. Harmful if inhaled. Narcotic effects.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Guinea pig	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
	Rabbit	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	55700 ppm, 3 Hours
		132 mg/l, 3 Hours
		50.1 mg/l
Oral		
LD50	Rat	5800 mg/kg

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Components	Species	Test Results
		2.2 ml/kg
Methanol (CAS 67-56-1)		
Acute		
Inhalation		
LC50	Cat	85.41 mg/l, 4.5 Hours
		43.68 mg/l, 6 Hours
	Mouse	79.43 mg/l, 134 Minutes
	Rat	> 115.9 mg/l, 4 Hours
		82.1 mg/l, 6 Hours
Oral		
LD50	Monkey	6000 mg/kg
	Pig	> 5000 mg/kg
	Rat	1187 - 2769 mg/kg
Methylcyclohexane (CAS 108-87-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
Vapor		
LC100	Rabbit	59.9 mg/l
LC50	Dog	> 4071 ppm, If <1L: Consumer Commodity Hours
		> 16.3 mg/l, If <1L: Consumer Commodity Hours
	Mouse	> 6564 ppm, If <1L: Consumer Commodity Hours
		> 26.3 mg/l, If <1L: Consumer Commodity Hours
	Rat	> 6564 ppm, If <1L: Consumer Commodity Hours
		> 26.3 mg/l, If <1L: Consumer Commodity Hours
LC50	Rat	16 mg/l, 4 Hours
Naphtha, (Petroleum), Hydrotreated Light (CAS 64742-49-0)		
Acute		
Dermal		
LD50	Guinea pig; Rabbit	> 9.4 ml/kg, 24 Hours
	Rabbit	> 1900 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 5000 mg/m3, 4 Hours
		> 4980 mg/m3
		> 4980 mg/m3, 4 Hours
		> 4.96 mg/l, 4 Hours
		13700 ppm, 4 Hours
Oral		
LD50	Rat	4820 mg/kg
n-Heptane (CAS 142-82-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours

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Components	Species	Test Results
Inhalation		
LC50	Rat	> 29.29 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Toluene (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg, 24 Hours
Inhalation		
LC50	Mouse	6405 - 7436 ppm, 6 Hours
		5320 ppm, 8 Hours
	Rat	5879 - 6281 ppm, 6 Hours
		25.7 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility. Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Methanol (CAS 67-56-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours

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Components		Species	Test Results
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Methylcyclohexane (CAS 108-87-2)			
Aquatic			
Fish	LC50	Striped bass (Morone saxatilis)	5.8 mg/l, 96 hours
n-Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
Toluene (CAS 108-88-3)			
Aquatic			
Algae	IC50	Algae	433.0001 mg/L, 72 Hours
Crustacea	EC50	Daphnia	7.645 mg/L, 48 Hours
		Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Acetone	-0.24
Methanol	-0.77
Methylcyclohexane	3.61
n-Heptane	4.66
Toluene	2.73

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number UN1950

UN proper shipping name Aerosols, flammable, (each not exceeding 1 L capacity)

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Label(s) 2.1

Packing group Not applicable.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions N82

Packaging exceptions 306

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Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	Yes
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.
Packaging Exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	None
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

DOT



FRS SDS Reference Library | S133 | Library page 1341

IATA; IMDG



Marine pollutant



General information DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	Listed.
Methanol (CAS 67-56-1)	Listed.
Toluene (CAS 108-88-3)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Methanol	67-56-1	20 - 40
Toluene	108-88-3	2.5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Methanol (CAS 67-56-1)
Toluene (CAS 108-88-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
Toluene (CAS 108-88-3)	6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
Toluene (CAS 108-88-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
Toluene (CAS 108-88-3)	594

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetone (CAS 67-64-1)
Methanol (CAS 67-56-1)
Naphtha, (Petroleum), Hydrotreated Light (CAS 64742-49-0)
Toluene (CAS 108-88-3)

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Carbon Dioxide (CAS 124-38-9)
Methanol (CAS 67-56-1)
Methylcyclohexane (CAS 108-87-2)
n-Heptane (CAS 142-82-5)
Toluene (CAS 108-88-3)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Carbon Dioxide (CAS 124-38-9)
Methanol (CAS 67-56-1)
Methylcyclohexane (CAS 108-87-2)
n-Heptane (CAS 142-82-5)
Toluene (CAS 108-88-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Carbon Dioxide (CAS 124-38-9)
Methanol (CAS 67-56-1)
Methylcyclohexane (CAS 108-87-2)
n-Heptane (CAS 142-82-5)
Toluene (CAS 108-88-3)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Methanol (CAS 67-56-1)
Toluene (CAS 108-88-3)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Ethyl Benzene (CAS 100-41-4)	Listed: June 11, 2004

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Methanol (CAS 67-56-1)	Listed: March 16, 2012
Toluene (CAS 108-88-3)	Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-24-2017

Revision date 05-23-2018

Version # 02

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information Product and Company Identification: Product and Company Identification

SAFETY DATA SHEET

Techspray Freeze Spray

Section 1. Identification

GHS product identifier : Techspray Freeze Spray

Product code : 1672-10S (22346)
1672-15S (22346)

Other means of identification : 1672-10S (22346)
1672-15S (22346)
Processing aid Cooling agents
Industrial/Professional use
Date of commencement of manufacture or import December 12, 2022 (22346)
Lot Number: 22346 or Lot Number: > 22346

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Processing aid Cooling agents Product Application and Material uses Reference Website: or Label QR code

Uses advised against	Reason
Other	Industrial/Professional use

Supplier's details : Techspray
8125 Cobb Center Drive
Kennesaw, GA 30152
Tel: 678-819-1408
Toll free: 1-800-858-4043
Fax: 1 806-372-8750

Emergency telephone number (with hours of operation) : Chemtrec - 1-800-424-9300
CANUTEC (Canadian Transportation): (613) 996-6666
Emergency phone: (800) 858-4043

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : AEROSOLS - Category 3

GHS label elements

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.

Precautionary statements

Prevention : Not applicable

Response : Not applicable.

Storage : Protect from sunlight. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : 1672-10S (22346)
1672-15S (22346)
Processing aid Cooling agents
Industrial/Professional use
Date of commencement of manufacture or import December 12, 2022 (22346)
Lot Number: 22346 or Lot Number: > 22346

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : Do not ingest. If swallowed then seek immediate medical assistance.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
frostbite
pain or irritation
redness
dryness

Ingestion : Adverse symptoms may include the following:
Ingestion Seek medical attention.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
carbonyl halides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Gas. [Aerosol.]

Color : Colorless.

Odor : Faint odor. Ethereal.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : -101°C (-149.8°F)

Boiling point or initial boiling point and boiling range : -26.2°C (-15.2°F)

Flash point : [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.

Vapor pressure : Not available.

Relative vapor density : 3.5 [Air = 1]

Relative density : Not applicable.

Density : 1.222 g/cm³ [20°C (68°F)]

Solubility(ies) :

Media	Result
cold water	Very slightly soluble
hot water	Very slightly soluble

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : >750°C (>1382°F)

Decomposition temperature : Not available.

Heat of combustion : 0 kJ/g

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Aerosol product

Type of aerosol : Spray

Ignition distance : 0 cm

Section 9. Physical and chemical properties

Enclosed space ignition - Time equivalent : 323 s/m³

Enclosed space ignition - Deflagration density : 1971 g/m³

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : Do not ingest. If swallowed then seek immediate medical assistance.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
frostbite
pain or irritation
redness
dryness

Ingestion : Adverse symptoms may include the following:
Ingestion Seek medical attention.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1950	Packaging Not approved	UN1950	UN1950	UN1950
UN proper shipping name	Aerosols, non-flammable	Packaging Not approved	Aerosols, non-flammable	Aerosols, non-flammable	Aerosols, non-flammable
Transport hazard class(es)	2.2 	-	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environmental hazards	No.	-	No.	No.	No.

Additional information

DOT Classification : **Packaging instruction** Non-bulk: 200. Bulk: 200.
Special provisions Must have a copy of DOT-SP 15146 with each shipment.

TDG Classification : Not approved

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act (CAA) 112 regulated flammable substances: 1,1-difluoroethane

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

Section 15. Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : GASES UNDER PRESSURE - Compressed gas

Composition/information on ingredients

Name	%	Classification
norflurane	≥90	GASES UNDER PRESSURE - Compressed gas
1,1-difluoroethane	≥10 - ≤25	GASES UNDER PRESSURE - Compressed gas

State regulations

Massachusetts : The following components are listed: DIFLUOROETHANE

New York : None of the components are listed.

New Jersey : The following components are listed: FLUORIDES; 1,1-DIFLUOROETHANE

Pennsylvania : None of the components are listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Ingredient name	Status
HFC-134a	Annex F, Group I
HFC-152a	Annex F, Group I

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

Chile : All components are listed or exempted.

China : All components are listed or exempted.

Colombia : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Section 15. Regulatory information

Taiwan : All components are listed or exempted.

Thailand : All components are listed or exempted.

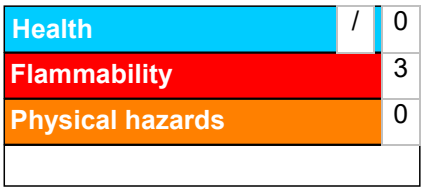
Turkey : All components are listed or exempted.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
GASES UNDER PRESSURE - Compressed gas	On basis of test data

History

Date of printing : 9/8/2026

Date of issue/Date of revision : 9/8/2026

Date of previous issue : 5/31/2022

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET
TG.C101.22 TensorGrip C101 Canister

SECTION 1: Identification: Product identifier and chemical identity

Product identifier

Product name TG.C101.22 TensorGrip C101 Canister

Relevant identified uses of the substance or mixture and uses advised against

Application Cleaning agent.

Details of the supplier of the safety data sheet

Supplier

Quin Global PTY LTD
63 Hincksman Street
Queanbeyan NSW 2620
(02) 6175 0574
info@quin-global.com.au

Emergency telephone number

Emergency telephone +61 2 6175 0574

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

Physical hazards Aerosol 1 - H222, H229 Press. Gas, Compressed - H280

Health hazards Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Asp. Tox. 1 - H304

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Label elements

Pictogram



Signal word Danger

Hazard statements

H229 Pressurised container: may burst if heated
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. - No smoking.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501 Dispose of contents/ container in accordance with national regulations.

Contains CITRUS TERPENES

TG.C101.22 TensorGrip C101 Canister

Other hazards

Other hazards

SECTION 3: Composition and information on ingredients

Substances

Mixture Statement

Mixtures

CITRUS TERPENES	**60-100%**
CAS number: 8028-48-6	
M factor (Acute) = 1	M factor (Chronic) = 1

Classification
Flam. Liq. 3 - H226
Skin Irrit. 2 - H315
Skin Sens. 1 - H317
Asp. Tox. 1 - H304
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

Description of first aid measures

General information If in doubt, get medical attention promptly.

Inhalation Move affected person to fresh air at once. Get medical attention.

Ingestion Get medical attention immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Skin Contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention.

Eye contact Continue to rinse for at least 15 minutes and get medical attention. Remove contact lenses, if present and easy to do. Continue rinsing. Show this Safety Data Sheet to the medical personnel.

Most important symptoms and effects, both acute and delayed

Inhalation Coughing, chest tightness, feeling of chest pressure.

Ingestion May cause stomach pain or vomiting.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Irritating to eyes.

Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Special hazards arising from the substance or mixture

TG.C101.22 TensorGrip C101 Canister

Hazardous combustion products	Oxides of carbon.

Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
Hazchem Code	2YE

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Follow precautions for safe handling described in this safety data sheet. Avoid contact with skin and eyes. Provide adequate ventilation. Do not smoke in work area.

Environmental precautions

Environmental precautions	Environmental Manager must be informed of all major spillages. Absorb spillage with inert, damp, non-combustible material.

Methods and material for containment and cleaning up

Methods for cleaning up	No smoking, sparks, flames or other sources of ignition near spillage. Contain and absorb spillage with sand, earth or other non-combustible material. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor.

Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage, including how the chemical may be safely used

Precautions for safe handling

Usage precautions	Avoid spilling. Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Eliminate all sources of ignition. Avoid inhalation of vapours and spray/mists. Provide adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage precautions	Keep container tightly closed. Keep container in a well-ventilated place. Keep away from heat, sparks and open flame.
Storage class	Flammable compressed gas storage.

Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls and personal protection

Control parameters

Exposure controls

Protective equipment



Appropriate engineering controls	In case of insufficient ventilation, wear suitable respiratory equipment. Mechanical ventilation or local exhaust ventilation may be required.
Eye/face protection	Chemical splash goggles and face shield.

TG.C101.22 TensorGrip C101 Canister

Hand protection	It is recommended that gloves are made of the following material: Nitrile rubber.
Other skin and body protection	Avoid contact with skin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	Colourless to pale yellow.
Odour	Characteristic.
Melting point	-96 Celsius
Initial boiling point and range	175°C/178°F @
Flash point	46°C CC (Closed cup).
Vapour pressure	2.1 mm Hg @ 20°C
Vapour density	0.01
Bulk density	838 kg/m³
Auto-ignition temperature	237°C
Refractive index	1.473

SECTION 10: Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	None known.
Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time.
Materials to avoid	Strong oxidising agents. Strong acids.
Hazardous decomposition products	Oxides of carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Toxicological effects	No information available.

Acute toxicity - oral

Species	Rat

SECTION 12: Ecological Information

Toxicity	Dangerous for the environment if discharged into watercourses.

Persistence and degradability

TG.C101.22 TensorGrip C101 Canister

Persistence and degradability The product is biodegradable.

Bioaccumulative potential

Bioaccumulative Potential Not available.

Mobility in soil

Mobility The product is partly miscible with water and may spread in the aquatic environment.

Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Other adverse effects

Other adverse effects Not known.

SECTION 13: Disposal considerations

Waste treatment methods

General information Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

UN number

UN No. (ADG) 3501

UN No. (IMDG) 3501

UN No. (ICAO) 3501

UN proper shipping name

Proper shipping name (ADG) CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (CITRUS TERPENES)

Proper shipping name (IMDG) CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (CITRUS TERPENES)

Proper shipping name (ICAO) CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (CITRUS TERPENES)

Transport hazard class(es)

ADG class 2.1

ADG classification code 8F

ADG label 2.1

IMDG class 2.1

ICAO class/division 2.1

Transport labels



Packing group

Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

TG.C101.22 TensorGrip C101 Canister

Special precautions for user

EmS	F-D, S-U
Hazchem Code	2YE

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SECTION 16: Any other relevant information

Revision date	3/06/2016
Revision	3
Supersedes date	1/06/2016
SDS No.	21618
Hazard statements in full	H226 Flammable liquid and vapour. H229 Pressurised container: may burst if heated H280 Contains gas under pressure; may explode if heated. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

SAFETY DATA SHEET
Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

1. Identification

Product identifier

Product name Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Product number USA

Recommended use of the chemical and restrictions on use

Application Canister Spray Adhesive

Details of the supplier of the safety data sheet

Supplier

Tensorgrip
5710 F St
Omaha NE 68117
(402) 731 3636
(402) 731 1473
marketing.us@quin-global.com

Emergency telephone number

Emergency telephone Chemtrec: 1 800 424 9300

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Flam. Aerosol 2 - H223 Press. Gas, Compressed - H280

Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H312 Eye Irrit. 2A - H319 STOT SE 3 - H336

Environmental hazards Aquatic Chronic 3 - H412

Human health The liquid may be irritating to eyes, respiratory system and skin. Symptoms following overexposure may include the following: Headache. Dizziness. Nausea, vomiting.

Label elements

Pictogram



Signal word Warning

Hazard statements

H223 Flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H302+H312 Harmful if swallowed or in contact with skin.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Precautionary statements

P271 Use only outdoors or in a well-ventilated area.
P301+P312 If swallowed: Call a poison center/ doctor if you feel unwell.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/ attention.

Supplemental label information

AT(d) 14.5% of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
AT(o) 14.5% of the mixture consists of ingredient(s) of unknown acute oral toxicity.

Contains

Methyl Acetate, Pentane

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

Methyl Acetate **30-60%**

CAS number: 79-20-9

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Eye Irrit. 2A - H319
STOT SE 3 - H336

Pentane **10-25%**

CAS number: 78-78-4

M factor (Acute) = 1

Classification
Flam. Liq. 1 - H224
Eye Irrit. 2A - H319
STOT SE 3 - H336
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information

Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if any discomfort continues.

Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Ingestion	Get medical attention immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Skin Contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Only remove contact lenses if the person is conscious, coherent and they can remove them themselves If adhesive bonding occurs, do not force eyelids apart. Continue to rinse for at least 15 minutes. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

Most important symptoms and effects, both acute and delayed

Inhalation	May cause coughing and difficulties in breathing. May cause eye and respiratory system irritation. Overexposure may depress the central nervous system, causing dizziness and intoxication.
Ingestion	Aspiration hazard if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract. May Cause the following effects: Gastrointestinal symptoms, including upset stomach. Central nervous system depression. Nausea, vomiting. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin contact	May be absorbed through the skin. Product has a defatting effect on skin. The liquid is irritating to eyes and skin. A single exposure may cause the following adverse effects: Dryness and/or cracking.
Eye contact	Causes serious eye irritation. Burns can occur. A single exposure may cause the following adverse effects: Pain. Conjunctivitis, irritation, tearing. Prolonged or repeated exposure may cause the following adverse effects: Irritation of eyes and mucous membranes. Prolonged contact causes serious eye and tissue damage.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards	Pressurized container: Must not be exposed to temperatures above 50°C/120°F Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	For personal protection, see Section 8. No smoking, sparks, flames or other sources of ignition near spillage.

Environmental precautions

Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Environmental precautions Avoid discharge into drains. Contain spillage with sand, earth or other suitable non-combustible material.

Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level. Container must be kept tightly closed when not in use. Use explosion proof electric equipment. Avoid discharge into drains or watercourses or onto the ground.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Keep container tightly closed. Keep only in the original container. Pressurized container: Must not be exposed to temperatures above 50°C/120°F

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Methyl Acetate

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm
Short-term exposure limit (15-minute): ACGIH 250 ppm
Long-term exposure limit (8-hour TWA): OSHA 200 ppm 610 mg/m³

Pentane

Long-term exposure limit (8-hour TWA): ACGIH 600 ppm

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.

Exposure controls

Protective equipment



Appropriate engineering controls This product must not be handled in a confined space without adequate ventilation. Avoid inhalation of vapors and spray/mists. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

Eye/face protection Wear chemical splash goggles.

Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Hand protection	Use protective gloves.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.
Hygiene measures	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.
Respiratory protection	If exposure levels are likely to be exceeded, use a half face mask fitted with an organic vapor filter for short term low level exposures. For long term or high level exposures, a supplied air respirator should be used.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Aerosol.
Color	Red.
Odor	Organic solvents.
Flash point	-20°F Not specified.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1.4% Upper flammable/explosive limit: 16%
Vapor density	Heavier than air
Relative density	0.887
Solubility(ies)	Slightly soluble in water.
Volatile organic compound	This product contains a maximum VOC content of 75 g/l.

10. Stability and reactivity

Stability	Stable at normal ambient temperatures and when used as recommended.
Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Oxidizing agents. Reducing agents.
Materials to avoid	Avoid contact with strong oxidizing agents. Avoid contact with strong reducing agents. Strong acids. Bases.
Hazardous decomposition products	Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2). Aldehydes. Hydrocarbons. Oxides of nitrogen. Cyanides.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	840.1

Acute toxicity - dermal

ATE dermal (mg/kg)	1,848.22

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)	21.78

Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Toxicological information on ingredients.

Methyl Acetate

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	49.28
Species	Rat
ATE inhalation (vapours mg/l)	11.0

Pentane

Acute toxicity - oral

ATE oral (mg/kg)	100.0

Acute toxicity - dermal

ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	1,280.0
Species	Rat
ATE inhalation (vapours mg/l)	11.0

Serious eye damage/irritation

Serious eye damage/irritation	Irritation of eyes is assumed.

Germ cell mutagenicity

Genotoxicity - in vitro	Ames Test Results: Negative.

Specific target organ toxicity - single exposure

STOT - single exposure	May cause drowsiness or dizziness

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Aspiration hazard

Aspiration hazard Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

General information Absorbtion of large quantities may cause: Dizziness. Euphoria. Agitation. Convulsions. Narcosis.

12. Ecological Information

13. Disposal considerations

Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

Air transport notes Cargo aircraft only. <75kg

UN Number

UN No. (ICAO) 3501

UN No. (DOT) 3501

UN proper shipping name

Proper shipping name (TDG) Chemical Under Pressure, Flammable, N.O.S. (Methyl Acetate, Pentane)

Proper shipping name (DOT) Chemical Under Pressure, Flammable, N.O.S. (Methyl Acetate, Pentane)

Transport hazard class(es)

DOT hazard class 2.1

Transport labels



Packing group

Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Present.

SARA 313 Emission Reporting
Present.

SARA (311/312) Hazard Categories
Present.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
Present.

Tensorgrip EP0-CA Low-VOC Reefer Repair Adhesive

Massachusetts "Right To Know" List
Present.

New Jersey "Right To Know" List
Present.

Pennsylvania "Right To Know" List
Present.

Inventories

Canada - DSL/NDSL
Present.

US - TSCA
Present.

16. Other information

Revision date	3/9/2018
Revision	10
Supersedes date	11/30/2017
SDS No.	22261
Hazard statements in full	H223 Flammable aerosol. H224 Extremely flammable liquid and vapor. H225 Highly flammable liquid and vapor. H280 Contains gas under pressure; may explode if heated. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H319 Causes serious eye irritation. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
ACA HMIS Health rating.	Slight hazard. (1)
ACA HMIS Flammability rating.	Extremely flammable. (4)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	B

DIRECTIONS FOR USE

PRODUCT LOGO

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. The manufacturer MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, many of which are solely within the user's knowledge and control, the user is responsible for determining whether the usage of this product is fit for a particular purpose and suitable for the user's method of use or application. It is essential that the user, not the manufacturer, evaluates this product to determine whether it is fit for a particular purpose and suitable for the user's method of use or application.

SAFETY DATA SHEET
Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

1. Identification

Product identifier

Product name Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Product number USA

Recommended use of the chemical and restrictions on use

Application Aerosol Spray Adhesive

Details of the supplier of the safety data sheet

Supplier

Tensorgrip
5710 F St
Omaha NE 68117
(402) 731 3636
(402) 731 1473
marketing.us@quin-global.com

Emergency telephone number

Emergency telephone Chemtrec: 1 800 424 9300

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Flam. Aerosol 1 - H222 Press. Gas, Compressed - H280

Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Eye Irrit. 2A - H319 Repr. 2 - H361f STOT SE 3 - H336 STOT RE 2 - H373

Environmental hazards Aquatic Chronic 3 - H412

Human health The liquid may be irritating to eyes, respiratory system and skin. Symptoms following overexposure may include the following: Headache. Dizziness. Nausea, vomiting.

Label elements

Pictogram



Signal word Danger

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Hazard statements

H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H302+H332 Harmful if swallowed or if inhaled.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Supplemental label information

AT(o) 18.0% of the mixture consists of ingredient(s) of unknown acute oral toxicity.

Contains

Methyl Acetate, Propane, Isobutane, n-Hexane

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

Methyl Acetate **30-60%**

CAS number: 79-20-9

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Eye Irrit. 2A - H319
STOT SE 3 - H336

Isobutane **10-25%**

CAS number: 75-28-5

Classification
Flam. Gas 1 - H220
Press. Gas, Compressed - H280

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Propane	**10-25%**
CAS number: 74-98-6	

Classification
Flam. Gas 1 - H220
Press. Gas, Liquefied - H280
Acute Tox. 4 - H332
Simple Asphyxiant - USH03

n-Hexane	**5-10%**
CAS number: 110-54-3	
M factor (Acute) = 1	

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319
Repr. 2 - H361f
STOT SE 3 - H336
STOT RE 2 - H373
Aquatic Chronic 2 - H411

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

Ingestion Get medical attention immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Skin Contact Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

Eye contact Remove any contact lenses and open eyelids wide apart. Only remove contact lenses if the person is conscious, coherent and they can remove them themselves If adhesive bonding occurs, do not force eyelids apart. Continue to rinse for at least 15 minutes. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

Most important symptoms and effects, both acute and delayed

General information High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Inhalation	Prolonged or repeated exposure may cause the following adverse effects: Irritation of nose, throat and airway. Coughing. Headache.
Ingestion	Prolonged or repeated exposure may cause the following adverse effects: Gastrointestinal symptoms, including upset stomach. Nausea, vomiting. Diarrhea.
Skin contact	Prolonged contact may cause redness, irritation and dry skin.
Eye contact	Causes serious eye irritation. Burns can occur. A single exposure may cause the following adverse effects: Pain. Conjunctivitis, irritation, tearing. Prolonged or repeated exposure may cause the following adverse effects: Irritation of eyes and mucous membranes. Prolonged contact causes serious eye and tissue damage.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards	Pressurized container: Must not be exposed to temperatures above 50°C/120°F Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	For personal protection, see Section 8. No smoking, sparks, flames or other sources of ignition near spillage.

Environmental precautions

Environmental precautions	Avoid discharge into drains. Contain spillage with sand, earth or other suitable non-combustible material.

Methods and material for containment and cleaning up

Methods for cleaning up	Stop leak if possible without risk. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

7. Handling and storage

Precautions for safe handling

Usage precautions	Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level. Container must be kept tightly closed when not in use. Use explosion proof electric equipment. Avoid discharge into drains or watercourses or onto the ground.
Advice on general occupational hygiene	Do not eat, drink or smoke when using this product.

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Keep container tightly closed. Keep only in the original container. Pressurized container: Must not be exposed to temperatures above 50°C/120°F

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Methyl Acetate

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm
Short-term exposure limit (15-minute): ACGIH 250 ppm
Long-term exposure limit (8-hour TWA): OSHA 200 ppm 610 mg/m³

Isobutane

Long-term exposure limit (8-hour TWA): ACGIH 1000 ppm
Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 800 ppm 1900 mg/m³

Propane

Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 1800 mg/m³ 1000 ppm
Long-term exposure limit (8-hour TWA): OSHA 1800 ppm 1000 mg/m³

n-Hexane

Long-term exposure limit (8-hour TWA): ACGIH 50 ppm
Sk
Ceiling Value: OSHA_TRANS 500 ppm 1800 mg/m³
Long-term exposure limit (8-hour TWA): OSHA 50 ppm 180 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.
Sk = Danger of cutaneous absorption.

Exposure controls

Protective equipment



Appropriate engineering controls This product must not be handled in a confined space without adequate ventilation. Avoid inhalation of vapors and spray/mists. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

Eye/face protection Wear chemical splash goggles.

Hand protection Use protective gloves.

Other skin and body protection Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

Hygiene measures DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Respiratory protection Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. If exposure levels are likely to be exceeded, use a half face mask fitted with an organic vapor filter for short term low level exposures. For long term or high level exposures, a supplied air respirator should be used.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance Aerosol.

Color Clear. Red.

Odor Organic solvents.

Initial boiling point and range -42.1˚C (-43.8˚F)

Flash point -104°C/-155°F Closed cup.

Upper/lower flammability or explosive limits Upper flammable/explosive limit: 9.5 g/100 g Lower flammable/explosive limit: 2.1 g/100 g

Relative density ~ .928

Solubility(ies) Negligibly soluble in water

Volatile organic compound This product contains a maximum VOC content of 249.2176 g/l. This product contains a maximum VOC content of 42% by weight .

10. Stability and reactivity

Stability Stable at normal ambient temperatures and when used as recommended.

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Oxidizing agents. Reducing agents.

Hazardous decomposition products Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2). Aldehydes. Halogenated hydrocarbons.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 975.08

Acute toxicity - dermal

ATE dermal (mg/kg) 2,616.06

Acute toxicity - inhalation

ATE inhalation (gases ppm) 25,000.0

ATE inhalation (vapours mg/l) 18.32

Toxicological information on ingredients.

Methyl Acetate

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg) 5,000.0

Species Rat

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat
ATE dermal (mg/kg)	1,100.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	49.28
Species	Rat
ATE inhalation (vapours mg/l)	11.0

Isobutane

Toxicological effects	No information available.
Carcinogenicity	
Carcinogenicity	Does not contain any substances known to be carcinogenic.
Inhalation	Suffocation (asphyxiant) hazard
Skin Contact	Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin.
Eye contact	Spray will evaporate and cool quickly and may cause frostbite or cold burns if in contact with skin.

Propane

Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} gases ppmV)	1,442.0
Species	Rat
Acute toxicity inhalation (LC_{50} vapours mg/l)	1,442.0
Species	Rat
ATE inhalation (gases ppm)	4,500.0
ATE inhalation (vapours mg/l)	11.0

n-Hexane

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	25,000.0

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Species	Rat
ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rabbit
ATE dermal (mg/kg)	1,100.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	171.6
Species	Rat
ATE inhalation (vapours mg/l)	11.0
Reproductive toxicity	
Reproductive toxicity - fertility	Suspected of damaging fertility.
Specific target organ toxicity - single exposure	
STOT - single exposure	May cause drowsiness or dizziness
Target organs	Central nervous system
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organs	Central nervous system
Aspiration hazard	
Aspiration hazard	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

General information	After absorption. Tiredness. Narcosis. After long term exposure to the chemical: CNS disorders, paralysis symptoms. (It generally applies to aliphatic hydrocarbons with 6 - 18 carbon atoms that they cause pneumonia, in some cases also pulmonary edema, upon direct inhalation, i.e. in conditions that can occur only in very special circumstances (nebulizations, spraying, inhalation of aerosols and similar.)) Absorbtion of large quantities may cause: Narcosis. Possible risk of adverse reproductive effects.
Inhalation	May cause drowsiness or dizziness. Vapors irritate the respiratory system.
Ingestion	Irritating. May cause nausea, stomach pain and vomiting.
Skin Contact	The product is irritating to eyes and skin.
Eye contact	Risk of corneal clouding.
Route of exposure	Inhalation Skin and/or eye contact
Target Organs	Eyes Skin Respiratory system, lungs Central nervous system Peripheral nervous system

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

12. Ecological Information

13. Disposal considerations

Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

Air transport notes 1. <75kg, 2. <150kg

UN Number

UN No. (ICAO) 1950

UN No. (DOT) Limited Quantity <1L, Aerosol

UN proper shipping name

Proper shipping name (DOT) Aerosols, Flammable

Transport hazard class(es)

Transport labels



Packing group

Not applicable.

15. Regulatory information

US Federal Regulations

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed or exempt:

n-Hexane

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

SARA 313 Emission Reporting

The following ingredients are listed or exempt:

n-Hexane

100%

SARA (311/312) Hazard Categories

Hazard

Isobutane

Fire
Pressure
Hazard

Propane

Yes.

Methyl Acetate

Fire
Acute
Chronic
Health hazard

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

n-Hexane

Acute
Chronic
Health hazard
Fire

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

Ths product does not contain any chemicals known to the State of California to cause cancer, birth or any other reproductive harm.

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

Isobutane

Present

Propane

Present

Methyl Acetate

Present

n-Hexane

Present

New Jersey "Right To Know" List

The following ingredients are listed or exempt:

Isobutane

Present.

Propane

Present.

Methyl Acetate

Present.

n-Hexane

Present.

Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

Isobutane

Present.

Propane

Present.

Methyl Acetate

Present.

n-Hexane

Present.

Inventories

Canada - DSL/NDSL

The following ingredients are listed or exempt:

Propane

DSL
Present.

Tensorgrip EP0-CA-AA Low-VOC Reefer Repair Adhesive

Methyl Acetate
Present.

n-Hexane
DSL

US - TSCA
Present.

Propane
Present.

Methyl Acetate
Present.

n-Hexane
Present.

16. Other information

Revision date	5/31/2017
Revision	8
Supersedes date	4/3/2017
SDS No.	20865
Hazard statements in full	USH03 May displace oxygen and cause rapid suffocation H220 Extremely flammable gas. H222 Extremely flammable aerosol. H225 Highly flammable liquid and vapor. H280 Contains gas under pressure; may explode if heated. H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H361f Suspected of damaging fertility. H373 May cause damage to organs through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
ACA HMIS Health rating.	Slight hazard. (1)
ACA HMIS Flammability rating.	Extremely flammable. (4)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	B

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. The manufacturer MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, many of which are solely within the user's knowledge and control, the user is responsible for determining whether the usage of this product is fit for a particular purpose and suitable for the user's method of use or application. It is essential that the user, not the manufacturer, evaluates this product to determine whether it is fit for a particular purpose and suitable for the user's method of use or application.

SAFETY DATA SHEET
Tensorgrip L10 High Temp Contact Adhesive

1. Identification

Product identifier

Product name Tensorgrip L10 High Temp Contact Adhesive

Product number USA

Recommended use of the chemical and restrictions on use

Application Canister Spray Adhesive

Details of the supplier of the safety data sheet

Supplier

Tensorgrip
5710 F St
Omaha NE 68117
(402) 731 3636
(402) 731 1473
marketing.us@quin-global.com

Emergency telephone number

Emergency telephone Chemtrec: 1 800 424 9300

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Flam. Aerosol 1 - H222 Press. Gas, Compressed - H280

Health hazards Acute Tox. 3 - H301 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Carc. 2 - H351 STOT SE 3 - H335, H336 STOT RE 2 - H373

Environmental hazards Not Classified

Human health The liquid may be irritating to eyes, respiratory system and skin. Symptoms following overexposure may include the following: Headache. Dizziness. Nausea, vomiting.

Label elements

Pictogram



Signal word Danger

Tensorgrip L10 High Temp Contact Adhesive

Hazard statements

H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H301 Toxic if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P261 Avoid breathing vapor/ spray.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a poison center/ doctor if you feel unwell.

Supplemental label information

AT(o) 15.0% of the mixture consists of ingredient(s) of unknown acute oral toxicity.

Contains

Methylene Chloride, Propane, Isobutane

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

Methylene Chloride **30-60%**

CAS number: 75-09-2

Classification
Acute Tox. 3 - H301
Acute Tox. 4 - H312
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319
Carc. 2 - H351
STOT SE 3 - H335, H336
STOT RE 2 - H373

Isobutane **10-30%**

CAS number: 75-28-5

Classification
Flam. Gas 1 - H220
Press. Gas, Compressed - H280

Tensorgrip L10 High Temp Contact Adhesive

Propane CAS number: 74-98-6	**10-30%**
Classification Flam. Gas 1 - H220 Press. Gas, Liquefied - H280 Acute Tox. 4 - H332 Simple Asphyxiant - USH03	

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

Ingestion Get medical attention immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Skin Contact Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

Eye contact Remove any contact lenses and open eyelids wide apart. Only remove contact lenses if the person is conscious, coherent and they can remove them themselves If adhesive bonding occurs, do not force eyelids apart. Continue to rinse for at least 15 minutes. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

Most important symptoms and effects, both acute and delayed

General information High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Prolonged or repeated exposure may cause the following adverse effects: Irritation of nose, throat and airway. Coughing. Headache.

Ingestion Prolonged or repeated exposure may cause the following adverse effects: Gastrointestinal symptoms, including upset stomach. Nausea, vomiting. Diarrhea.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Prolonged or repeated exposure may cause the following adverse effects: Irritation and redness, followed by blurred vision.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Tensorgrip L10 High Temp Contact Adhesive

Specific hazards Pressurized container: Must not be exposed to temperatures above 50°C/120°F Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. No smoking, sparks, flames or other sources of ignition near spillage.

Environmental precautions

Environmental precautions Avoid discharge into drains. Contain spillage with sand, earth or other suitable non-combustible material.

Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level. Container must be kept tightly closed when not in use. Use explosion proof electric equipment. Avoid discharge into drains or watercourses or onto the ground.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Keep container tightly closed. Keep only in the original container. Pressurized container: Must not be exposed to temperatures above 50°C/120°F

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Methylene Chloride

Long-term exposure limit (8-hour TWA): ACGIH 50 ppm
A3
Short-term exposure limit (15-minute): OSHA 125 ppm
Long-term exposure limit (8-hour TWA): OSHA 25 ppm

Isobutane

Tensorgrip L10 High Temp Contact Adhesive

Long-term exposure limit (8-hour TWA): ACGIH 1000 ppm
Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 800 ppm 1900 mg/m³

Propane

Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 1800 mg/m³ 1000 ppm
Long-term exposure limit (8-hour TWA): OSHA 1800 ppm 1000 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.
A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.
OSHA = Occupational Safety and Health Administration.

Exposure controls

Protective equipment



Appropriate engineering controls	This product must not be handled in a confined space without adequate ventilation. Avoid inhalation of vapors and spray/mists. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.
Eye/face protection	Wear chemical splash goggles.
Hand protection	Use protective gloves.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.
Hygiene measures	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.
Respiratory protection	If exposure levels are likely to be exceeded, use a half face mask fitted with an organic vapor filter for short term low level exposures. For long term or high level exposures, a supplied air respirator should be used.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Aerosol.
Color	Clear Red. Green.
Odor	Organic solvents.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapor density	Not determined.
Relative density	1.22
Solubility(ies)	Negligibly soluble in water
Volatile organic compound	This product contains a maximum VOC content of 160.5 g/l.

Tensorgrip L10 High Temp Contact Adhesive

10. Stability and reactivity

Stability	Stable at normal ambient temperatures and when used as recommended.
Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Oxidizing agents. Reducing agents.
Materials to avoid	Strong oxidizing agents. Aluminum. Magnesium. Amines. Strong alkalis.
Hazardous decomposition products	Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2). Aldehydes. Hydrocarbons.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	160.08

Acute toxicity - dermal

ATE dermal (mg/kg)	2,071.56

Acute toxicity - inhalation

ATE inhalation (gases ppm)	30,000.0
ATE inhalation (vapours mg/l)	73.33

Toxicological information on ingredients.

Methylene Chloride

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,000.0
Species	Rat
ATE oral (mg/kg)	100.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	52.0
Species	Rat
ATE inhalation (vapours mg/l)	11.0

Carcinogenicity

Carcinogenicity	Cancinogenicity - rat - inhalation Limited evidence of carcinogenicity in animal studies

Tensorgrip L10 High Temp Contact Adhesive

Target organ for carcinogenicity	Tumerigenic: Carcinogenic by RTECS criteria. Endochrine: Tumors
IARC carcinogenicity	IARC Group 2B Possibly carcinogenic to humans.
NTP carcinogenicity	Reasonably anticipated to be a human carcinogen.

Specific target organ toxicity - single exposure

STOT - single exposure	May cause respiratory irritation. May cause drowsiness or dizziness

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Inhalation - May cause damage to organs through prolonged or repeated exposure -Central nervous system Oral - May cause damage to organs through prolonged or repeated exposure -Liver, blood.
General information	RTECS: PA8050000

Isobutane

Toxicological effects	No information available.

Carcinogenicity

Carcinogenicity	Does not contain any substances known to be carcinogenic.
Inhalation	Suffocation (asphyxiant) hazard
Skin Contact	Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin.
Eye contact	Spray will evaporate and cool quickly and may cause frostbite or cold burns if in contact with skin.

Propane

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} gases ppmV)	1,442.0
Species	Rat
Acute toxicity inhalation (LC_{50} vapours mg/l)	1,442.0
Species	Rat
ATE inhalation (gases ppm)	4,500.0
ATE inhalation (vapours mg/l)	11.0

12. Ecological Information

13. Disposal considerations

Waste treatment methods

Tensorgrip L10 High Temp Contact Adhesive

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

Air transport notes Cargo aircraft only. <75kg

UN Number

UN No. (ICAO) 3501

UN No. (DOT) 3501

UN proper shipping name

Proper shipping name (TDG) Chemical Under Pressure, Flammable, N.O.S.

Proper shipping name (DOT) Chemical Under Pressure, Flammable, N.O.S.

Transport hazard class(es)

DOT hazard class 2.1

Transport labels



Packing group

Not applicable.

15. Regulatory information

US Federal Regulations

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

Present.

Methylene Chloride

Final CERCLA RQ: 1000(454) pounds (Kilograms)

SARA 313 Emission Reporting

Present.

Methylene Chloride

0.1 %

SARA (311/312) Hazard Categories

Present.

Isobutane

Fire
Pressure
Hazard

Propane

Yes.

Methylene Chloride

Acute
Health hazard
Chronic
Health hazard

US State Regulations

Tensorgrip L10 High Temp Contact Adhesive

California Proposition 65 Carcinogens and Reproductive Toxins

Present.

Isobutane

Ths product does not contain any chemicals known to the State of California to cause cancer, birth or any other reproductive harm.

Methylene Chloride

Known to the State of California to cause cancer.

Massachusetts "Right To Know" List

Present.

Isobutane

Propane

Methylene Chloride

New Jersey "Right To Know" List

Present.

Isobutane

Propane

Methylene Chloride

Pennsylvania "Right To Know" List

Present.

Isobutane

Propane

Methylene Chloride

Inventories

Canada - DSL/NDSL

Present.

Propane

US - TSCA

Present.

Methylene Chloride

16. Other information

Revision date	4/3/2017
Revision	5
Supersedes date	11/1/2016
SDS No.	20475

Tensorgrip L10 High Temp Contact Adhesive

Hazard statements in full	H220 Extremely flammable gas. H222 Extremely flammable aerosol. H280 Contains gas under pressure; may explode if heated. H301 Toxic if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs (Oral (Category 2), Inhalation (Category 2), Blood, Central nervous system, Liver) through prolonged or repeated exposure. USH03 May displace oxygen and cause rapid suffocation
ACA HMIS Health rating.	Moderate hazard. (2)
ACA HMIS Flammability rating.	Ignites easily. (3)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	B

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. The manufacturer MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, many of which are solely within the user's knowledge and control, the user is responsible for determining whether the manufacturer of this product is fit for a particular purpose and suitable for users' method of use or application. It is essential that the user evaluate this product, not the manufacturer, to determine whether it is fit for a particular purpose and suitable for users' method of use or application

S101 CITRUS-BASED SPECIALTY ADHESIVE CLEANER

DATA SHEET

Tensorgrip



As part of our Cleaners range, S101 is suitable for use on most surfaces.

PRODUCT DESCRIPTION

TensorGrip S101 is a bio-safe citrus solvent/cleaner, degreaser and adhesive remover designed to safely and powerfully remove adhesives and other tough substances. Available in small canisters for purging adhesive spray equipment.

ADVANTAGES

- Exceptional cleaning/degreasing power
- Non-corrosive
- Pleasant citrus scent
- Compatible with most plastics
- Biodegradable
- Cleans hoses, spray guns and other adhesive equipment
- Decal residue removal – safe for powder-coated surfaces
- Safer to use than most cleaners/adhesive removers

DIRECTIONS FOR USE

- **TensorGrip S101** can be sprayed on and wiped off. Wash off any remaining residue with water.
- This Specialty Citrus Cleaner can be safely used on most surfaces, including painted surfaces, glass, porcelain, concrete, and many plastics and vinyls.
- To clean adhesive application hoses and guns, attach the hose and gun to a canister of TensorGrip S101 and flush until clear (about 45 seconds).
- An 8lb canister will work for approximately 8 purges; 22L size works for approximately 28 purges.
- The product will not be damaged by freezing. Warm up to room temperature for use.

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QUIN GLOBAL

Tensorgrip

ECR23-080-1123

S101 CITRUS-BASED SPECIALTY ADHESIVE CLEANER

DATA SHEET

Tensorgrip

CHEMICAL TECHNICAL DATA

TYPICAL PROPERTIES

• Total Solids	0%
• VOC Content	747 g/L
• Color	Clear
• System Flammability	Combustible liquid; Non-Flammable propellant (22L canisters) Flammable propellant (Aerosols & 7L Canisters)
• Solvent System	D-Limonene, Mineral Spirits
• Dry time	1-3 mins dependent on temp & humidity
• Open time	N/A
• Shelf Life	18 months from date of manufacture

PACKAGING

• 650ml	Aerosol Cans
• 7L	Disposable Canister
• 22L	Disposable Canister

STORAGE

HANDLING & STORAGE

- Consult Material Safety Data Sheet prior to use.
- Do not store at temperatures over 120°F/50°C.
- Avoid exposure to direct sunlight.
- Do not store directly on concrete floor.
- Always store above 60°F/15°C
- When connected, keep valve open and hose pressurized at all times
- Always test our adhesives to determine suitability for your particular application prior to use in production

DISCLAIMER OF WARRANTY: Quin Global makes neither warranty of merchantability or fitness for any use nor any other warranty, express or implied, in the sales of its products. Buyer assumes all risk and liability for the results obtained by the use of its products, whether used singly or in combination with other products.

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Tensorgrip

SAFETY DATA SHEET
Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

1. Identification

Product identifier

Product name Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

Product number USA

Recommended use of the chemical and restrictions on use

Application Aerosol Cleaning Solvent

Details of the supplier of the safety data sheet

Supplier
Quin Global
5710 F St
(402) 731 3636
(402) 731 1473
marketing.us@quin-global.com

Emergency telephone number

Emergency telephone Chemtrec: 1 800 424 9300 (Mon - Fri) 09:00 - 16:00

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Aerosol 2 - H223, H229 Press. Gas, Compressed - H280

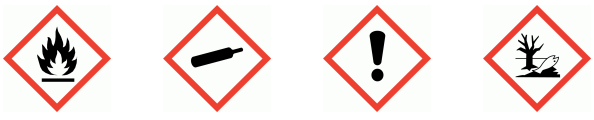
Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Irrit. 2 - H315 Skin Sens. 1 - H317

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Human health The liquid may be irritating to eyes, respiratory system and skin. Symptoms following overexposure may include the following: Headache. Dizziness. Nausea, vomiting.

Label elements

Pictogram



Signal word Warning

Hazard statements
H223 Flammable aerosol.
H229 Pressurized container: may burst if heated.
H280 Contains gas under pressure; may explode if heated.
H302+H312 Harmful if swallowed or in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

Precautionary statements	P261 Avoid breathing vapor/spray. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 If on skin: Wash with plenty of water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P410+P403 Protect from sunlight. Store in a well-ventilated place.
Supplemental label information	AT(o) 15.0% of the mixture consists of ingredient(s) of unknown acute oral toxicity.
Contains	d-Limonene, Propane, Isobutane, Odorless Mineral Spirits

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Substances

Mixtures

d-Limonene **30-60%**

CAS number: 94266-47-4

Classification
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Skin Irrit. 2 - H315
Skin Sens. 1 - H317

Isobutane **10-30%**

CAS number: 75-28-5

Classification
Flam. Gas 1 - H220
Press. Gas, Compressed - H280

Propane **10-30%**

CAS number: 74-98-6

Classification
Flam. Gas 1 - H220
Press. Gas, Liquefied - H280
Acute Tox. 4 - H332
Simple Asphyxiant - USH03

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

Odorless Mineral Spirits	**10-30%**
CAS number: 64742-47-8	

Classification
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
STOT SE 3 - H336
Asp. Tox. 1 - H304

The Full Text for all Hazard Statements are Displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

Ingestion Get medical attention immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Skin Contact Remove affected person from source of contamination. Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues.

Eye contact Remove any contact lenses and open eyelids wide apart. Only remove contact lenses if the person is conscious, coherent and they can remove them themselves If adhesive bonding occurs, do not force eyelids apart. Continue to rinse for at least 15 minutes. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

Most important symptoms and effects, both acute and delayed

General information High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Prolonged or repeated exposure may cause the following adverse effects: Irritation of nose, throat and airway. Coughing. Headache.

Ingestion Prolonged or repeated exposure may cause the following adverse effects: Gastrointestinal symptoms, including upset stomach. Nausea, vomiting. Diarrhea.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Prolonged or repeated exposure may cause the following adverse effects: Irritation and redness, followed by blurred vision.

5.Fire-fighting measures

Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards Pressurized container: Must not be exposed to temperatures above 50°C/120°F Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Containers can burst violently or explode when heated, due to excessive pressure build-up.

Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. No smoking, sparks, flames or other sources of ignition near spillage.

Environmental precautions

Environmental precautions Avoid discharge into drains. Contain spillage with sand, earth or other suitable non-combustible material.

Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. No smoking, sparks, flames or other sources of ignition near spillage. Avoid the spillage or runoff entering drains, sewers or watercourses. Eliminate all sources of ignition. Wash thoroughly after dealing with a spillage. Absorb in vermiculite, dry sand or earth and place into containers. Provide adequate ventilation.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level. Container must be kept tightly closed when not in use. Use explosion proof electric equipment. Avoid discharge into drains or watercourses or onto the ground.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Keep container tightly closed. Keep only in the original container. Pressurized container: Must not be exposed to temperatures above 50°C/120°F

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

d-Limonene

Long-term exposure limit (8-hour TWA): WEEL:US.AIHA = Workplace Environmental Exposure Level Guides 30 ppm

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

Isobutane

Long-term exposure limit (8-hour TWA): ACGIH 1000 ppm
Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 800 ppm 1900 mg/m3

Propane

Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 1800 mg/m³ 1000 ppm

Long-term exposure limit (8-hour TWA): OSHA 1800 ppm 1000 mg/m³

Odorless Mineral Spirits

Long-term exposure limit (8-hour TWA): ACGIH 200 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 500 ppm 2000 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.

Exposure controls

Protective equipment



Appropriate engineering controls	This product must not be handled in a confined space without adequate ventilation. Avoid inhalation of vapors and spray/mists. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.
Eye/face protection	Wear chemical splash goggles.
Hand protection	Use protective gloves.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.
Hygiene measures	DO NOT SMOKE IN WORK AREA! Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke. Wash promptly with soap and water if skin becomes contaminated. Wash hands at the end of each work shift and before eating, smoking and using the toilet.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. If exposure levels are likely to be exceeded, use a full face mask fitted with an organic AXP3 filter for short term low level exposures. For long term or high level exposures, compressed airline breathing apparatus should be used.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Aerosol.
Color	Clear.
Odor	Strong. Solvent.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour density	Not determined.

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

Relative density	~ 0.8295
Solubility(ies)	Negligibly soluble in water
Volatile organic compound	This product contains a maximum VOC content of 742 g/l.

10. Stability and reactivity

Stability	Stable at normal ambient temperatures and when used as recommended.
Conditions to avoid	Avoid heat, flames and other sources of ignition. Reducing agents. Avoid contact with the following materials: Oxidizing agents.
Materials to avoid	Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2). Aldehydes. Hydrocarbons. Ketones

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	607.14285714

Acute toxicity - dermal

ATE dermal (mg/kg)	1,571.42857143

Acute toxicity - inhalation

ATE inhalation (gases ppm)	30,000.0
ATE inhalation (vapours mg/l)	37.93103448

Toxicological information on ingredients.

d-Limonene

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rabbit
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,000.0
Species	Rabbit
ATE dermal (mg/kg)	1,100.0

Carcinogenicity

IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Aspiration hazard

Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

Inhalation	Irritation of nose, throat and airway.
Skin Contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Isobutane

Toxicological effects	No information available.

Carcinogenicity

Carcinogenicity	Does not contain any substances known to be carcinogenic.

Inhalation	Suffocation (asphyxiant) hazard
Skin Contact	Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin.
Eye contact	Spray will evaporate and cool quickly and may cause frostbite or cold burns if in contact with skin.

Propane

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} gases ppmV)	1,442.0
Species	Rat
Acute toxicity inhalation (LC_{50} vapours mg/l)	1,442.0
Species	Rat
ATE inhalation (gases ppm)	4,500.0
ATE inhalation (vapours mg/l)	11.0

Odorless Mineral Spirits

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rabbit

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	5.0
Species	Rat
ATE inhalation (vapours mg/l)	11.0

Skin corrosion/irritation

Animal data	Irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Slightly irritating.

Carcinogenicity

Carcinogenicity	Does not contain any substances known to be carcinogenic.

Specific target organ toxicity - single exposure

STOT - single exposure	High concentrations may cause: Central nervous system depression. Continued inhalation may result in: Unconsciousness and/or death.

Specific target organ toxicity - repeated exposure

Target organs	Kidneys
Route of entry	Skin absorption Skin and/or eye contact Inhalation Ingestion

12. Ecological Information

13. Disposal considerations

Waste treatment methods

Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

Air transport notes	1. <75kg, 2. <150kg

UN Number

UN No. (DOT)	Limited Quantity <1L, Aerosol
UN No. (ICAO)	1950

UN proper shipping name

Proper shipping name (DOT)	Aerosols, Flammable (D-Limonene, Isobutane, Propane)
Proper shipping name (IMDG)	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.
Proper shipping name (ICAO)	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.

Transport hazard class(es)

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

DOT hazard class 2.1

Transport labels



Packing group

Not applicable.

15. Regulatory information

Inventories

US - TSCA

Present.

Isobutane

Propane

d-Limonene

16. Other information

Revision date	6/24/2015
Revision	6
Supersedes date	6/23/2015
SDS No.	20688
Hazard statements in full	H223 Flammable aerosol. H229 Pressurized container: may burst if heated. H280 Contains gas under pressure; may explode if heated. H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. USH03 May displace oxygen and cause rapid suffocation
ACA HMIS Health rating.	Slight hazard. (1)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	B
ACA HMIS Flammability rating.	Extremely flammable. (4)

Tensorgrip S101 AA Citrus-Based Specialty Adhesive Cleaner

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. The manufacturer MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, many of which are solely within the user's knowledge and control, the user is responsible for determining whether the manufacturer of this product is fit for a particular purpose and suitable for users' method of use or application. It is essential that the user evaluate this product, not the manufacturer, to determine whether it is fit for a particular purpose and suitable for users' method of use or application

SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**Thin Wheel - Cutting**
Product Code:	Thin Wheels
UPC Number:	66252823602

Other means of identification:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:	Abrasive Product.

Chemical manufacturer address and telephone number:

Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
Website:	www.Nortonabrasives.com
General Phone Number:	508-795-5000

Emergency phone number:

Emergency Phone Number:	508-795-5000

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions: None generally recognized.

Fiberglass

Inhalation: Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Sulfates/Sulfides	No Data	10 - 30 by weight	
Resin	9003-35-4	10 - 30 by weight	
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Aluminum Oxide, Non-fibrous	1344-28-1	60 - 100 by weight	215-691-6

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.

Skin Contact: Immediately wash skin with soap and plenty of water.
Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid: Not applicable.

Indication of immediate medical attention and special treatment needed:

Note to Physicians: Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.

Unsuitable extinguishing media:	Not applicable.

Specific hazards arising from the chemical:

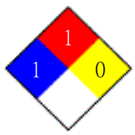
Hazardous Combustion Byproducts:	Not applicable.
Unusual Fire Hazards:	Not applicable.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Not applicable.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures:	Not applicable.

Methods and materials for containment and cleaning up:

Methods for containment:	Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.
Methods for cleanup:	Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions:	Not applicable.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling:	Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.
Hygiene Practices:	Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage:	Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ingredient	Guideline OSHA	Guideline ACGIH	Quebec Canada	Ontario Canada	Alberta Canada
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass	TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass			
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)	TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)	OEL-TWA: 10 mg/m3

Ingredient	Mexico	British Columbia Canada			
Aluminum Oxide, Non-fibrous	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)			

Appropriate engineering controls:

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description: Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.

Respiratory Protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PPE Pictograms:



SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance: Solid article.

Color: Not determined.

Odor: Odorless.

Odor Threshold: Not determined.

Boiling Point: Not determined.

Melting Point: Not determined.

Density: Not determined.

Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity:	Not applicable.

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization:	Not reported.

Conditions To Avoid:

Conditions to Avoid:	Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials:	Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products:	Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity:	This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	**NIOSH**	**OSHA**	**IARC**	**NTP**		**MEXICO**
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Resin :

RTECS Number: SM8542500

Skin: Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Fiberglass :

RTECS Number: LK3651000

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation: Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity: Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

UN number: Not regulated as hazardous material for transportation.

UN proper shipping name: Not regulated as hazardous material for transportation.

Transport hazard class(es): Not regulated as hazardous material for transportation.

Packing group: Not regulated as hazardous material for transportation.

Environmental hazards: Not regulated as hazardous material for transportation.

Special precautions for user: Not regulated as hazardous material for transportation.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Inventory Status

	Japan ENCS	EINECS Number	South Korea KECL	Australia AICS	Canada DSL
Resin					Listed
Fiberglass					Listed
Aluminum Oxide, Non-fibrous	(1) -23	262-373-8	KE-01012	Listed	Listed

	TSCA Inventory Status				
Resin	Listed				
Fiberglass	Listed				
Aluminum Oxide, Non-fibrous	Listed				

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Fiberglass :

EC Number: 266-046-0

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

State Right To Know

	RI	MN	IL	PA	MA
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 1
HMIS Fire Hazard: 1
HMIS Reactivity: 0

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	

SDS Creation Date: August 15, 2009

SDS Revision Date: March 31, 2015

MSDS Revision Notes: GHS Update

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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**Thin Wheel - Cutting**
Product Code:	Thin Wheels
UPC Number:	66252838454

Other means of identification:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:	Abrasive Product.

Chemical manufacturer address and telephone number:

	United States	Canada
Manufacturer Name:	Saint-Gobain Abrasives, Inc.	Saint-Gobain Canada, Inc.
Address:	1 New Bond Street Worcester, MA 01615	28 Albert Street, W. Plattsville, ON N0J 1S0
Website:	www.Nortonabrasives.com	www.Nortonabrasives.com
General Phone Number:	800-551-4413	519-684-7441

Emergency phone number:

Emergency Phone Number:	508-795-5000	508-795-5000
CHEMTREC:	For emergencies in the US, call CHEMTREC: 800-424-9300	For emergencies in Canada, call CHEMTREC: 800-424-9300

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.

Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	None generally recognized.

Fiberglass

Inhalation:	Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Sulfates/Sulfides	No Data	10 - 30 by weight	
Resin	9003-35-4	10 - 30 by weight	
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Inorganic fluorides	Not Applicable	5 - 10 by weight	
Aluminum Oxide, Non-fibrous	1344-28-1	30 - 60 by weight	215-691-6

Notes : Actual grinding tests with wheels known to contain Crystalline Silica did not produce any detectable amount of respirable free Crystalline Silica.

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid:	Not applicable.

Indication of immediate medical attention and special treatment needed:

Note to Physicians:	Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Unsuitable extinguishing media:	Not applicable.

Specific hazards arising from the chemical:

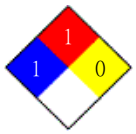
Hazardous Combustion Byproducts:	Not applicable.
Unusual Fire Hazards:	Not applicable.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Not applicable.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures:	Not applicable.

Methods and materials for containment and cleaning up:

Methods for containment:	Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.
Methods for cleanup:	Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions:	Not applicable.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ingredient	**Guideline OSHA**	**Guideline NIOSH**	**Guideline ACGIH**	**Quebec Canada**	**Ontario Canada**
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass		TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass		
Inorganic fluorides	PEL-TWA 2.5 mg/m3	REL-TWA 2.5 mg/m3	TLV-TWA 2.5 mg/m3		
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)		TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)

Ingredient	**Alberta Canada**	**Mexico**	**British Columbia Canada**		
Aluminum Oxide, Non-fibrous	OEL-TWA: 10 mg/m3	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		

Appropriate engineering controls:

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description: Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.

Respiratory Protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PPE Pictograms:



SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance:	Solid article.
Color:	Not determined.
Odor:	Odorless.
Odor Threshold:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Density:	Not determined.
Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity:	Not applicable.

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization:	Not reported.

Conditions To Avoid:

Conditions to Avoid:	Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials:	Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products:	Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	NIOSH	OSHA	IARC	NTP		MEXICO
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Resin :

RTECS Number: SM8542500

Skin: Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Fiberglass :

RTECS Number: LK3651000

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation: Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity: Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

UN number: Not regulated as hazardous material for transportation.

UN proper shipping name: Not regulated as hazardous material for transportation.

Transport hazard class(es): Not regulated as hazardous material for transportation.

Packing group: Not regulated as hazardous material for transportation.

Environmental hazards: Not regulated as hazardous material for transportation.

Special precautions for user: Not regulated as hazardous material for transportation.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Inventory Status

	Japan ENCS	EINECS Number	South Korea KECL	Australia AICS	Canada DSL
Resin					Listed
Fiberglass					Listed
Aluminum Oxide, Non-fibrous	(1) -23	262-373-8	KE-01012	Listed	Listed

	TSCA Inventory Status				
Resin	Listed				
Fiberglass	Listed				
Aluminum Oxide, Non-fibrous	Listed				

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Fiberglass :

EC Number: 266-046-0

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

State Right To Know

	RI	MN	IL	PA	MA
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

Health Hazard	1
Fire Hazard	1

HMIS Reactivity:	0

Reactivity	**0**
Personal Protection	

SDS Creation Date:	June 03, 2018
SDS Revision Date:	June 03, 2018
SDS Revision Notes:	GHS Update

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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**Thin Wheel - Depressed Center**
Product Code:	Thin Wheels
UPC Number:	66252842011

Other means of identification:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:	Abrasive Product.

Chemical manufacturer address and telephone number:

Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
Website:	www.Nortonabrasives.com
General Phone Number:	508-795-5000

Emergency phone number:

Emergency Phone Number:	508-795-5000

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions:	None generally recognized.

Fiberglass

Inhalation:	Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Inorganic fluorides	Not Applicable	1 - 5 by weight	
Sulfates/Sulfides	No Data	10 - 30 by weight	
Resin	9003-35-4	10 - 30 by weight	
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Silicon carbide	409-21-2	10 - 30 by weight	206-991-8
Calcium oxide	1305-78-8	1 - 5 by weight	
Aluminum Oxide, Non-fibrous	1344-28-1	30 - 60 by weight	215-691-6
Titanium dioxide	13463-67-7	0 - 1 by weight	236-675-5

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid:	Not applicable.

Indication of immediate medical attention and special treatment needed:

Note to Physicians:	Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Unsuitable extinguishing media:	Not applicable.

Specific hazards arising from the chemical:

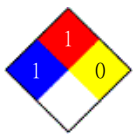
Hazardous Combustion Byproducts:	Not applicable.
Unusual Fire Hazards:	Not applicable.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Not applicable.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures:	Not applicable.

Methods and materials for containment and cleaning up:

Methods for containment:	Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.
Methods for cleanup:	Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions:	Not applicable.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ingredient	**Guideline OSHA**	**Guideline NIOSH**	**Guideline ACGIH**	**Quebec Canada**	**Ontario Canada**
Inorganic fluorides	PEL-TWA 2.5 mg/m3	REL-TWA 2.5 mg/m3	TLV-TWA 2.5 mg/m3		
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass		TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass		
Silicon carbide	PEL-TWA: 15 mg/m3 Total particulate/dust (T) PEL-TWA: 5 mg/m3 Respirable fraction (R)		TLV-TWA: 10 mg/m3 Inhalable fraction (I) TLV-TWA: 3 mg/m3 Respirable fraction (R) TLV-TWA: 0.1 f/cc Respirable fraction (R)	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T) OEL-TWAEV: 3 mg/m3 Respirable fraction (R) OEL-TWAEV: 10 mg/m3 Inhalable fraction (I) OEL-TWAEV: 0.1 f/cc Respirable fraction (R)
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)		TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)
Titanium dioxide			TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)

Ingredient	**Alberta Canada**	**Mexico**	**British Columbia Canada**		
Silicon carbide	OEL-TWA: 10 mg/m3	LMPE-PPT: 10 mg/m3 LMPE-CT: 20 mg/m3	OEL-TWA: 10 mg/m3 Inhalable fraction (I) OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 0.1 f/cc Respirable fraction (R)		
Aluminum Oxide, Non-fibrous	OEL-TWA: 10 mg/m3	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Titanium dioxide	OEL-TWA: 10 mg/m3 Total particulate/dust (T)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R)		

Appropriate engineering controls:

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
PPE Pictograms:	

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance:	Solid article.
Color:	Not determined.
Odor:	Odorless.
Odor Threshold:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Density:	Not determined.
Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity:	Not applicable.

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products: Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	**NIOSH**	**OSHA**	**IARC**	**NTP**		**MEXICO**
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen
Titanium dioxide	No Data	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Resin :

RTECS Number: SM8542500

Skin: Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Fiberglass :

RTECS Number: LK3651000

Silicon carbide :

RTECS Number: VW0450000

Inhalation: No Data

Calcium oxide :

RTECS Number: EW3100000

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation: Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

Titanium dioxide :

RTECS Number: XR2275000

Skin: Skin - Human Standard Draize test. : 300 ug/3D-I - [mild] (RTECS)

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration: 1 mg/kg - [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)

Ingestion:	Oral - Rodent rat TDLo - Lowest published toxic dose: 60 gm/kg - [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:	Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

UN number:	Not regulated as hazardous material for transportation.
UN proper shipping name:	Not regulated as hazardous material for transportation.
Transport hazard class(es):	Not regulated as hazardous material for transportation.
Packing group:	Not regulated as hazardous material for transportation.
Environmental hazards:	Not regulated as hazardous material for transportation.
Special precautions for user:	Not regulated as hazardous material for transportation.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Inventory Status

	Japan ENCS	EINECS Number	South Korea KECL	Australia AICS	Canada DSL
Resin					Listed
Fiberglass					Listed
Silicon carbide					Listed
Aluminum Oxide, Non-fibrous	(1) -23	262-373-8	KE-01012	Listed	Listed
Titanium dioxide	(1)-558		KE-33900	Listed	Listed

	TSCA Inventory Status				

Resin	Listed				
Fiberglass	Listed				
Silicon carbide	Listed				
Calcium oxide	Listed				
Aluminum Oxide, Non-fibrous	Listed				
Titanium dioxide	Listed				

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Fiberglass :

EC Number: 266-046-0

Silicon carbide :

EC Number: 206-991-8

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

Titanium dioxide :

EC Number: 236-675-5

State Right To Know

	RI	MN	IL	PA	MA
Silicon carbide				Listed	Listed
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed
Titanium dioxide	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				
Titanium dioxide	No Data				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 1
HMIS Fire Hazard: 1
HMIS Reactivity: 0

Health Hazard	**1**
Fire Hazard	**1**
Reactivity	**0**
Personal Protection	

SDS Creation Date: August 15, 2009

SDS Revision Date: March 31, 2015

SDS Revision Notes: GHS Update

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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**Thin Wheel Product**
Product Code:	Thin Wheels
UPC Number:	66252840387

Other means of identification:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:	Abrasive Product.

Chemical manufacturer address and telephone number:

Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
Website:	www.Nortonabrasives.com
General Phone Number:	508-795-5000

Emergency phone number:

Emergency Phone Number:	508-795-5000

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions:	None generally recognized.

Fiberglass

Inhalation:	Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Inorganic fluorides	Not Applicable	1 - 5 by weight	
Sulfates/Sulfides	No Data	5 - 10 by weight	
Resin	9003-35-4	10 - 30 by weight	
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Calcium carbonate	1317-65-3	1 - 5 by weight	215-279-6
Aluminum Oxide, Non-fibrous	1344-28-1	60 - 100 by weight	215-691-6
Amorphous Silica, Fused	60676-86-0	5 - 10 by weight	262-373-8
Titanium dioxide	13463-67-7	0 - 1 by weight	236-675-5

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid:	Not applicable.

Indication of immediate medical attention and special treatment needed:

Note to Physicians:	Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Unsuitable extinguishing media:	Not applicable.

Specific hazards arising from the chemical:

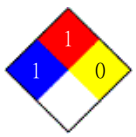
Hazardous Combustion Byproducts:	Not applicable.
Unusual Fire Hazards:	Not applicable.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Not applicable.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures:	Not applicable.

Methods and materials for containment and cleaning up:

Methods for containment:	Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.
Methods for cleanup:	Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions:	Not applicable.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ingredient	**Guideline OSHA**	**Guideline NIOSH**	**Guideline ACGIH**	**Quebec Canada**	**Ontario Canada**
Inorganic fluorides	PEL-TWA 2.5 mg/m3	REL-TWA 2.5 mg/m3	TLV-TWA 2.5 mg/m3		
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass		TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass		
Calcium carbonate				VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)		TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)
Amorphous Silica, Fused	OSHA PEL-TWA 0.1 mg/m3	REL-TWA: 0.05 mg/m3 (Respirable)	ACGIH TLV-TWA 0.1 mg/m3	VEMP-TWA: 0.1 mg/m3 Respirable fraction (R)	OEL-TWAEV: 0.1 mg/m3 Respirable fraction (R)
Titanium dioxide			TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)

Ingredient	**Alberta Canada**	**Mexico**	**British Columbia Canada**		
Calcium carbonate	OEL-TWA: 10 mg/m3		OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Aluminum Oxide, Non-fibrous	OEL-TWA: 10 mg/m3	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Amorphous Silica, Fused	OEL-TWA: 0.1 mg/m3 Respirable fraction (R)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)			
Titanium dioxide	OEL-TWA: 10 mg/m3 Total particulate/dust (T)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R)		

Appropriate engineering controls:

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
PPE Pictograms:	

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance:	Solid article.
Color:	Not determined.
Odor:	Odorless.
Odor Threshold:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Density:	Not determined.
Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity:	Not applicable.

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products: Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	**NIOSH**	**OSHA**	**IARC**	**NTP**		**MEXICO**
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen
Amorphous Silica, Fused	No Data	NIOSH carcinogen	No Data	No Data	No Data		No Data
Titanium dioxide	No Data	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Resin :

RTECS Number: SM8542500

Skin: Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Fiberglass :

RTECS Number: LK3651000

Calcium carbonate :

RTECS Number: EV9580000

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation: Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

Amorphous Silica, Fused :

RTECS Number: VV7328000

Inhalation: Inhalation - Rat TCLo: 197 mg/m3/6H/26W (Intermittent) [Lungs, Thorax, or Respiration - Changes in lung weight] (RTECS)

Titanium dioxide :

RTECS Number: XR2275000

Skin: Skin - Human Standard Draize test. : 300 ug/3D-I - [mild] (RTECS)

Inhalation:	Inhalation - Rat TCLo - Lowest published toxic concentration: 1 mg/kg - [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)
Ingestion:	Oral - Rodent rat TDLo - Lowest published toxic dose: 60 gm/kg - [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:	Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

UN number:	Not regulated as hazardous material for transportation.
UN proper shipping name:	Not regulated as hazardous material for transportation.
Transport hazard class(es):	Not regulated as hazardous material for transportation.
Packing group:	Not regulated as hazardous material for transportation.
Environmental hazards:	Not regulated as hazardous material for transportation.
Special precautions for user:	Not regulated as hazardous material for transportation.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Inventory Status

	Japan ENCS	EINECS Number	South Korea KECL	Australia AICS	Canada NDSL
Calcium carbonate					Listed
Aluminum Oxide, Non-fibrous	(1) -23	262-373-8	KE-01012	Listed	
Amorphous Silica, Fused		262-373-8			
Titanium dioxide	(1)-558		KE-33900	Listed	

	Canada DSL	TSCA Inventory Status			
Resin	Listed	Listed			
Fiberglass	Listed	Listed			
Calcium carbonate		Listed			
Aluminum Oxide, Non-fibrous	Listed	Listed			
Amorphous Silica, Fused	Listed	Listed			
Titanium dioxide	Listed	Listed			

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Amorphous Silica, Fused :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1404(1487)

Fiberglass :

EC Number: 266-046-0

Calcium carbonate :

EC Number: 215-279-6

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

Amorphous Silica, Fused :

EC Number: 262-373-8

Titanium dioxide :

EC Number: 236-675-5

State Right To Know

	RI	MN	IL	PA	MA
Calcium carbonate				Listed	Listed
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed
Amorphous Silica, Fused	Listed				Listed
Titanium dioxide	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				
Titanium dioxide	No Data				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

Health Hazard	1
Fire Hazard	1

HMIS Reactivity:	0

Reactivity	**0**
Personal Protection	

SDS Creation Date:	August 15, 2009
SDS Revision Date:	March 31, 2015
SDS Revision Notes:	GHS Update

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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**Thin Wheel Product**
Product Code:	Thin Wheels
UPC Number:	66252840388

Other means of identification:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:	Abrasive Product.

Chemical manufacturer address and telephone number:

Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
Website:	www.Nortonabrasives.com
General Phone Number:	508-795-5000

Emergency phone number:

Emergency Phone Number:	508-795-5000

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions:	None generally recognized.

Fiberglass

Inhalation:	Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Inorganic fluorides	Not Applicable	1 - 5 by weight	
Sulfates/Sulfides	No Data	5 - 10 by weight	
Resin	9003-35-4	10 - 30 by weight	
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Calcium carbonate	1317-65-3	1 - 5 by weight	215-279-6
Aluminum Oxide, Non-fibrous	1344-28-1	60 - 100 by weight	215-691-6
Amorphous Silica, Fused	60676-86-0	5 - 10 by weight	262-373-8
Titanium dioxide	13463-67-7	0 - 1 by weight	236-675-5

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with soap and plenty of water. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid:	Not applicable.

Indication of immediate medical attention and special treatment needed:

Note to Physicians:	Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Unsuitable extinguishing media:	Not applicable.

Specific hazards arising from the chemical:

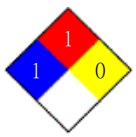
Hazardous Combustion Byproducts:	Not applicable.
Unusual Fire Hazards:	Not applicable.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Not applicable.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures:	Not applicable.

Methods and materials for containment and cleaning up:

Methods for containment:	Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.
Methods for cleanup:	Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions:	Not applicable.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ingredient	**Guideline OSHA**	**Guideline NIOSH**	**Guideline ACGIH**	**Quebec Canada**	**Ontario Canada**
Inorganic fluorides	PEL-TWA 2.5 mg/m3	REL-TWA 2.5 mg/m3	TLV-TWA 2.5 mg/m3		
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass		TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass		
Calcium carbonate				VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)		TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)
Amorphous Silica, Fused	OSHA PEL-TWA 0.1 mg/m3	REL-TWA: 0.05 mg/m3 (Respirable)	ACGIH TLV-TWA 0.1 mg/m3	VEMP-TWA: 0.1 mg/m3 Respirable fraction (R)	OEL-TWAEV: 0.1 mg/m3 Respirable fraction (R)
Titanium dioxide			TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)

Ingredient	**Alberta Canada**	**Mexico**	**British Columbia Canada**		
Calcium carbonate	OEL-TWA: 10 mg/m3		OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Aluminum Oxide, Non-fibrous	OEL-TWA: 10 mg/m3	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Amorphous Silica, Fused	OEL-TWA: 0.1 mg/m3 Respirable fraction (R)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)			
Titanium dioxide	OEL-TWA: 10 mg/m3 Total particulate/dust (T)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R)		

Appropriate engineering controls:

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
PPE Pictograms:	

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance:	Solid article.
Color:	Not determined.
Odor:	Odorless.
Odor Threshold:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Density:	Not determined.
Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity:	Not applicable.

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products: Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	**NIOSH**	**OSHA**	**IARC**	**NTP**		**MEXICO**
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen
Amorphous Silica, Fused	No Data	NIOSH carcinogen	No Data	No Data	No Data		No Data
Titanium dioxide	No Data	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Resin :

RTECS Number: SM8542500

Skin: Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Fiberglass :

RTECS Number: LK3651000

Calcium carbonate :

RTECS Number: EV9580000

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation: Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

Amorphous Silica, Fused :

RTECS Number: VV7328000

Inhalation: Inhalation - Rat TCLo: 197 mg/m3/6H/26W (Intermittent) [Lungs, Thorax, or Respiration - Changes in lung weight] (RTECS)

Titanium dioxide :

RTECS Number: XR2275000

Skin: Skin - Human Standard Draize test. : 300 ug/3D-I - [mild] (RTECS)

Inhalation:	Inhalation - Rat TCLo - Lowest published toxic concentration: 1 mg/kg - [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)
Ingestion:	Oral - Rodent rat TDLo - Lowest published toxic dose: 60 gm/kg - [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:	Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

UN number:	Not regulated as hazardous material for transportation.
UN proper shipping name:	Not regulated as hazardous material for transportation.
Transport hazard class(es):	Not regulated as hazardous material for transportation.
Packing group:	Not regulated as hazardous material for transportation.
Environmental hazards:	Not regulated as hazardous material for transportation.
Special precautions for user:	Not regulated as hazardous material for transportation.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Inventory Status

	Japan ENCS	EINECS Number	South Korea KECL	Australia AICS	Canada NDSL
Calcium carbonate					Listed
Aluminum Oxide, Non-fibrous	(1) -23	262-373-8	KE-01012	Listed	
Amorphous Silica, Fused		262-373-8			
Titanium dioxide	(1)-558		KE-33900	Listed	

	Canada DSL	TSCA Inventory Status			
Resin	Listed	Listed			
Fiberglass	Listed	Listed			
Calcium carbonate		Listed			
Aluminum Oxide, Non-fibrous	Listed	Listed			
Amorphous Silica, Fused	Listed	Listed			
Titanium dioxide	Listed	Listed			

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Amorphous Silica, Fused :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1404(1487)

Fiberglass :

EC Number: 266-046-0

Calcium carbonate :

EC Number: 215-279-6

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

Amorphous Silica, Fused :

EC Number: 262-373-8

Titanium dioxide :

EC Number: 236-675-5

State Right To Know

	RI	MN	IL	PA	MA
Calcium carbonate				Listed	Listed
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed
Amorphous Silica, Fused	Listed				Listed
Titanium dioxide	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				
Titanium dioxide	No Data				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

Health Hazard	1
Fire Hazard	1

HMIS Reactivity:	0

Reactivity	**0**
Personal Protection	

SDS Creation Date:	August 15, 2009
SDS Revision Date:	March 31, 2015
SDS Revision Notes:	GHS Update

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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**Thin Wheel Product**
Product Code:	Thin Wheels
UPC Number:	66252840391

Other means of identification:

Recommended use of the chemical and restrictions on use:

Product Use/Restriction:	Abrasive Product.

Chemical manufacturer address and telephone number:

Manufacturer Name:	Saint-Gobain Abrasives, Inc.
Address:	1 New Bond Street Worcester, MA 01615
Website:	www.Nortonabrasives.com
General Phone Number:	508-795-5000

Emergency phone number:

Emergency Phone Number:	508-795-5000

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

Signal Word:	Not applicable.
GHS Class:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200
Hazard Statements:	Not applicable.
Precautionary Statements:	Not applicable.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions: None generally recognized.

Fiberglass

Inhalation: Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Inorganic fluorides	Not Applicable	1 - 5 by weight	
Sulfates/Sulfides	No Data	5 - 10 by weight	
Resin	9003-35-4	10 - 30 by weight	
Fiberglass	65997-17-3	1 - 5 by weight	266-046-0
Calcium carbonate	1317-65-3	1 - 5 by weight	215-279-6
Aluminum Oxide, Non-fibrous	1344-28-1	60 - 100 by weight	215-691-6
Amorphous Silica, Fused	60676-86-0	5 - 10 by weight	262-373-8
Titanium dioxide	13463-67-7	0 - 1 by weight	236-675-5

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.

Skin Contact: Immediately wash skin with soap and plenty of water.
Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid: Not applicable.

Indication of immediate medical attention and special treatment needed:

Note to Physicians: Not applicable.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Unsuitable extinguishing media:	Not applicable.

Specific hazards arising from the chemical:

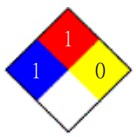
Hazardous Combustion Byproducts:	Not applicable.
Unusual Fire Hazards:	Not applicable.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Not applicable.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0



SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures:	Not applicable.

Methods and materials for containment and cleaning up:

Methods for containment:	Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.
Methods for cleanup:	Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

Reference to other sections:

Other Precautions:	Not applicable.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ingredient	**Guideline OSHA**	**Guideline NIOSH**	**Guideline ACGIH**	**Quebec Canada**	**Ontario Canada**
Inorganic fluorides	PEL-TWA 2.5 mg/m3	REL-TWA 2.5 mg/m3	TLV-TWA 2.5 mg/m3		
Fiberglass	PEL-TWA: 1 f/cc as Continuous filament glass		TLV-TWA: 1 f/cc as Continuous filament glass TLV-TWA: 5 mg/m3 as Continuous filament glass		
Calcium carbonate				VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	
Aluminum Oxide, Non-fibrous	PEL-TWA: 5 mg/m3 Respirable fraction (R) PEL-TWA: 15 mg/m3 Total particulate/dust (T)		TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)
Amorphous Silica, Fused	OSHA PEL-TWA 0.1 mg/m3	REL-TWA: 0.05 mg/m3 (Respirable)	ACGIH TLV-TWA 0.1 mg/m3	VEMP-TWA: 0.1 mg/m3 Respirable fraction (R)	OEL-TWAEV: 0.1 mg/m3 Respirable fraction (R)
Titanium dioxide			TLV-TWA: 10 mg/m3	VEMP-TWA: 10 mg/m3 Total particulate/dust (T)	OEL-TWAEV: 10 mg/m3 Total particulate/dust (T)

Ingredient	**Alberta Canada**	**Mexico**	**British Columbia Canada**		
Calcium carbonate	OEL-TWA: 10 mg/m3		OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Aluminum Oxide, Non-fibrous	OEL-TWA: 10 mg/m3	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 3 mg/m3 Respirable fraction (R) OEL-TWA: 10 mg/m3 OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-STEL: 20 mg/m3 Total particulate/dust (T)		
Amorphous Silica, Fused	OEL-TWA: 0.1 mg/m3 Respirable fraction (R)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)			
Titanium dioxide	OEL-TWA: 10 mg/m3 Total particulate/dust (T)	MPE-PPT: 0.1 mg/m3 Respirable fraction (R)	OEL-TWA: 10 mg/m3 Total particulate/dust (T) OEL-TWA: 3 mg/m3 Respirable fraction (R)		

Appropriate engineering controls:

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
PPE Pictograms:	

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance:	Solid article.
Color:	Not determined.
Odor:	Odorless.
Odor Threshold:	Not determined.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Density:	Not determined.
Solubility:	Not determined.
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Evaporation Rate:	Not determined.
pH:	Not determined.
Viscosity:	Not determined.
Coefficient of Water/Oil Distribution:	Not determined.
Flammability:	Not determined.
Flash Point:	None.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Auto Ignition Temperature:	Not applicable.
Explosive Properties:	Excessive dust accumulation could present a potential combustible dust hazard.
VOC Content:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity:	Not applicable.

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

Hazardous Decomposition Products:

Special Decomposition Products: Not applicable.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: This product has not been tested for its toxicity.

Carcinogens:							
	ACGIH	**NIOSH**	**OSHA**	**IARC**	**NTP**		**MEXICO**
Aluminum Oxide, Non-fibrous	A4 Not Classifiable as a Human Carcinogen	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen
Amorphous Silica, Fused	No Data	NIOSH carcinogen	No Data	No Data	No Data		No Data
Titanium dioxide	No Data	No Data	No Data	No Data	No Data		A4 Not Classifiable as a Human Carcinogen

Resin :

RTECS Number: SM8542500

Skin: Administration onto the skin - Rat LD50 : >2 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 : >5 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Fiberglass :

RTECS Number: LK3651000

Calcium carbonate :

RTECS Number: EV9580000

Aluminum Oxide, Non-fibrous :

RTECS Number: BD1200000

Inhalation: Inhalation - Rat TCLo: 200 mg/m3/5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration - Chronic pulmonary edema; Related to Chronic Data - death] (RTECS)

Amorphous Silica, Fused :

RTECS Number: VV7328000

Inhalation: Inhalation - Rat TCLo: 197 mg/m3/6H/26W (Intermittent) [Lungs, Thorax, or Respiration - Changes in lung weight] (RTECS)

Titanium dioxide :

RTECS Number: XR2275000

Skin: Skin - Human Standard Draize test. : 300 ug/3D-I - [mild] (RTECS)

Inhalation:	Inhalation - Rat TCLo - Lowest published toxic concentration: 1 mg/kg - [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (Intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)
Ingestion:	Oral - Rodent rat TDLo - Lowest published toxic dose: 60 gm/kg - [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity:	Please contact the phone number or address of the manufacturer listed in Section 1 for information on ecotoxicity.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

UN number:	Not regulated as hazardous material for transportation.
UN proper shipping name:	Not regulated as hazardous material for transportation.
Transport hazard class(es):	Not regulated as hazardous material for transportation.
Packing group:	Not regulated as hazardous material for transportation.
Environmental hazards:	Not regulated as hazardous material for transportation.
Special precautions for user:	Not regulated as hazardous material for transportation.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Inventory Status

	Japan ENCS	EINECS Number	South Korea KECL	Australia AICS	Canada NDSL
Calcium carbonate					Listed
Aluminum Oxide, Non-fibrous	(1) -23	262-373-8	KE-01012	Listed	
Amorphous Silica, Fused		262-373-8			
Titanium dioxide	(1)-558		KE-33900	Listed	

	Canada DSL	TSCA Inventory Status			
Resin	Listed	Listed			
Fiberglass	Listed	Listed			
Calcium carbonate		Listed			
Aluminum Oxide, Non-fibrous	Listed	Listed			
Amorphous Silica, Fused	Listed	Listed			
Titanium dioxide	Listed	Listed			

Aluminum Oxide, Non-fibrous :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.50(1298)

Amorphous Silica, Fused :

Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1404(1487)

Fiberglass :

EC Number: 266-046-0

Calcium carbonate :

EC Number: 215-279-6

Aluminum Oxide, Non-fibrous :

EC Number: 215-691-6

Amorphous Silica, Fused :

EC Number: 262-373-8

Titanium dioxide :

EC Number: 236-675-5

State Right To Know

	RI	MN	IL	PA	MA
Calcium carbonate				Listed	Listed
Aluminum Oxide, Non-fibrous	Listed	Listed	No Data	Listed	Listed
Amorphous Silica, Fused	Listed				Listed
Titanium dioxide	Listed	Listed	No Data	Listed	Listed

	NJ				
Aluminum Oxide, Non-fibrous	Listed: NJ Hazardous List; Substance Number: 2891				
Titanium dioxide	No Data				

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

Health Hazard	1
Fire Hazard	1

HMIS Reactivity:	0

Reactivity	**0**
Personal Protection	

SDS Creation Date:	August 15, 2009
SDS Revision Date:	March 31, 2015
SDS Revision Notes:	GHS Update

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SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID : 560076
Product Name : TODCO FG LUBE 39000.1012FG 12oz (AEROSOL)
Revision Date : Oct 2, 2019
Version: 1.1
Distributor's Name : TODCO OVERHEAD DOOR CORP.
Address : 1332 Fairground Rd. East - Marion, OH 43302

Date Printed: July 17, 2024
Supersedes Date: Apr 08, 2015

Emergency Phone : 1-800-535-5053
Information Phone : (740) 383-6376
Fax # :
Product/Recommended Uses: Food Grade Lubricant

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Aerosol - Category 1

Pictograms:



Signal Word:

Danger

Hazardous Statements - Physical:

H222, H229 - Extremely flammable aerosol. Pressurized container may burst if heated.

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Do not pierce or burn, even after use.

Precautionary Statements - Storage:

P410 - Protect from sunlight.

P412 - Do not expose to temperatures exceeding 50°C / 122°F.

P403 - Store in a well-ventilated place.

P233 - Keep container tightly closed.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% by Weight
0008042-47-5	MINERAL OIL, SLAB OIL	51% - 90%
0000074-98-6	PROPANE	5% - 11%
0067784-80-9	Soybean oil, Me ester	5% - 10%
0000106-97-8	BUTANE	2% - 4%

SECTION 4) FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

Eliminate all ignition sources if safe to do so.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact:

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently blot or brush away excess product. Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. Call a POISON CENTER/doctor if you feel unwell. Store contaminated clothing under water and wash before reuse or discard.

Ingestion:

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor/. If vomiting occurs naturally, lie on your side, in the recovery position.

Never give anything by mouth to an unconscious or convulsing victim. Keep person warm and quiet.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water, fog, dry chemical, or carbon dioxide.
Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Unsuitable Extinguishing Media:

Water may be ineffective but can be used to cool containers exposed to heat or flame.

Specific Hazards in Case of Fire:

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force.

Aerosol cans may rupture when heated.
Heated cans may burst.

In fire, will decompose to carbon dioxide, carbon monoxide

Fire-Fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA)and full turnout gear.

Care should always be exercised in dust/mist areas.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

Flammable/combustible material.
ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stay upwind; keep out of low areas. Immediately turn off or isolate any source of ignition. Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately. Use absorbent sweeping compound to soak up material and put into suitable container for proper disposal.

Recommended Equipment:

Positive pressure, full-face piece self-contained breathing apparatus(SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use explosion proof equipment. Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

SECTION 7) HANDLING AND STORAGE

General:

For industrial and institutional use only.
For use by trained personnel only.
Keep away from children.
Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them. Ground all structures, transfer containers and equipment to conform to the national electrical code. Use procedures that prevent static electrical sparks. Static electricity may accumulate and create a fire hazard.

Store at temperatures below 120°F.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection:

Chemical goggles, safety glasses with side shields or vented/splash proof goggles. Contact lenses may absorb irritants. Particles may adhere to lenses and cause corneal damage.

Skin Protection:

Wear gloves, long sleeved shirt, long pants and other protective clothing as required to minimize skin contact.

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Chemical-resistant clothing is recommended to avoid prolonged contact. Avoid unnecessary skin contact.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapors.

When spraying more than one half can continuously or more than one can consecutively, use NIOSH approved respirator.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
BUTANE								800	1900			
PROPANE	1000	1800			1			1000	1800			

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
BUTANE	1000			
PROPANE	See Appendix F: Minimal Oxygen Content			

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	6.52 lb/gal
Density VOC	0.65 lb/gal
% VOC	10%
VOC Actual	0.65 lb/gal
VOC Regulatory	0.65 lb/gal

Appearance	N.A.
Odor Threshold	N.A.
Odor Description	N.A.
pH	N.A.
Water Solubility	N.A.
Flammability	Flashpoint below 73°F
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Melting Point	N.A.
Vapor Density	N.A.
Freezing Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.

Decomposition Pt	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	Slower than ether
VOC Composite Partial Pressure	5371.68 mmHg (Calculated @ 20°C / 68°F)

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable.

Conditions to Avoid:

High temperatures.

Incompatible Materials:

None known.

Hazardous Reactions/Polymerization:

Will not occur.

Hazardous Decomposition Products:

In fire, will decompose to carbon dioxide, carbon monoxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Overexposure will cause defatting of skin.

Serious Eye Damage/Irritation:

Eye irritant.

Overexposure will cause redness and burning sensation.

Carcinogenicity:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Respiratory or Skin Sensitization:

No data available.

Specific Target Organ Toxicity - Single Exposure:

No data available.

Specific Target Organ Toxicity - Repeated Exposure:

No data available.

Aspiration Hazard:

Aspiration hazard if swallowed.

Acute Toxicity:

Inhalation: effect of overexposure include irritation of respiratory tract, headache, dizziness, nausea, and loss of coordination. Extreme overexposure may result in unconsciousness and possibly death.

0000106-97-8 BUTANE

LC50 (mouse): 202000 ppm (481000 mg/m3) (4-hour exposure); cited as 680 mg/L (2-hour exposure) (9)
LC50 (rat): 276000 ppm (658000 mg/m3) (4-hour exposure); cited as 658 mg/L (4- hour exposure) (9)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No data available.

Persistence and Degradability:

No data available.

Bio-Accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Water Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

UN1950, Aerosols, flammable, 2.1 (LTD QTY)

IMDG Information:

UN1950, Aerosols, flammable, 2.1 (LTD QTY)

IATA Information:

UN1950, Aerosols, flammable, 2.1 (LTD QTY)

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000074-98-6	PROPANE	5% - 11%	SARA312,VOC,TSCA,ACGIH,OSHA
0000106-97-8	BUTANE	2% - 4%	SARA312,VOC,TSCA,ACGIH
0008042-47-5	MINERAL OIL, SLAB OIL	51% - 90%	SARA312,TSCA
0067784-80-9	Soybean oil, Me ester	5% - 10%	SARA312,TSCA

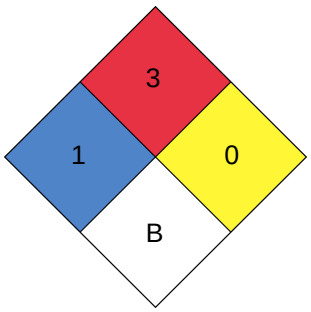
SECTION 16) OTHER INFORMATION

Glossary:

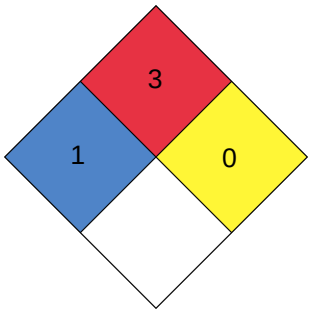
* There are points of differences between OSHA GHS and UN GHS. In 90% of the categories, they can be used interchangeably, but for the Skin Corrosion/Irritant Category and the Specific Target Organ Toxicity (Single and Repeated Exposure) Categories. In these cases, our system will say UN GHS.

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS



NFPA



Chronic : ☐

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

560079
Feb 11, 2015
Food Grade Lubricant
Version : 1.0

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID : 560079
Product Name : Food Grade Lubricant
Revision Date : Feb 11, 2015 **Date Printed :** Apr 08, 2015
Supersedes Date : N.A.
Manufacturer's Name : Todco Overhead Door Corp
Address : 1332 Fairground Road E Marion, OH, US, 43302
Emergency Phone :
Information Phone : (740) 383-6376
SDS Fax # :
Product/Recommended Uses:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Aerosol - Category 1

Pictograms:



Signal Word:

Danger

Hazardous Statements - Physical:

H222, H229 - Extremely flammable aerosol, Pressurized container may burst if heated

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Do not pierce or burn, even after use.

Precautionary Statements - Storage:

P410 - Protect from sunlight.

P412 - Do not expose to temperatures exceeding 50°C/122°F.

P403 - Store in a well-ventilated place.

P233 - Keep container tightly closed.

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SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% by Weight
0008042-47-5	MINERAL OIL, SLAB OIL	51% - 90%
0000074-98-6	PROPANE	5% - 11%
0067784-80-9	Soybean oil, Me ester	5% - 10%
0000106-97-8	BUTANE	2% - 4%

SECTION 4) FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

Eliminate all ignition sources if safe to do so.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact:

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently blot or brush away excess product. Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. Call a POISON CENTER/doctor if you feel unwell. Store contaminated clothing under water and wash before reuse or discard.

Ingestion:

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor/. If vomiting occurs naturally, lie on your side, in the recovery position.

Never give anything by mouth to an unconscious or convulsing victim. Keep person warm and quiet.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water, fog, dry chemical, or carbon dioxide.
Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Unsuitable Extinguishing Media:

Water may be ineffective but can be used to cool containers exposed to heat or flame.

Specific Hazards in Case of Fire:

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force.

Aerosol cans may rupture when heated.
Heated cans may burst.

In fire, will decompose to carbon dioxide, carbon monoxide

Fire-Fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA)and full turnout gear.

Care should always be exercised in dust/mist areas.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

Flammable/combustible material.
ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stay upwind; keep out of low areas. Immediately turn off or isolate any source of ignition. Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately. Use absorbent sweeping compound to soak up material and put into suitable container for proper disposal.

Recommended Equipment:

Positive pressure, full-face piece self-contained breathing apparatus(SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use explosion proof equipment. Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

SECTION 7) HANDLING AND STORAGE

General:

For industrial and institutional use only.
For use by trained personnel only.
Keep away from children.
Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them. Ground all structures, transfer containers and equipment to conform to the national electrical code. Use procedures that prevent static electrical sparks. Static electricity may accumulate and create a fire hazard.

Store at temperatures below 120°F.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection:

Chemical goggles, safety glasses with side shields or vented/splash proof goggles. Contact lenses may absorb irritants. Particles may adhere to lenses and cause corneal damage.

Skin Protection:

Wear gloves, long sleeved shirt, long pants and other protective clothing as required to minimize skin contact.

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Chemical-resistant clothing is recommended to avoid prolonged contact. Avoid unnecessary skin contact.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapors.

When spraying more than one half can continuously or more than one can consecutively, use NIOSH approved respirator.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
BUTANE								800	1900			
PROPANE	1000	1800			1			1000	1800			

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
BUTANE	1000			
PROPANE	See Appendix F: Minimal Oxygen Content			

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	6.51770 lb/gal
Density VOC	0.84730 lb/gal
% VOC	13.00000%
VOC Actual	0.84730 lb/gal
VOC Actual	101.53214 g/l
VOC Regulatory	0.84730 lb/gal
VOC Regulatory	101.53214 g/l

Appearance	N.A.
Odor Threshold	N.A.
Odor Description	N.A.
pH	N.A.
Water Solubility	N.A.
Flammability	Flashpoint below 73 °F
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Melting Point	N.A.
Vapor Density	Slower than ether
Freezing Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.

Decomposition Pt	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	Slower than ether
VOC Composite Partial Pressure	5371.68 mmHg (Calculated @ 20 C/68 F)

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable.

Conditions to Avoid:

High temperatures.

Incompatible Materials:

None known.

Hazardous Reactions/Polymerization:

Will not occur.

Hazardous Decomposition Products:

In fire, will decompose to carbon dioxide, carbon monoxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Overexposure will cause defatting of skin.

Serious Eye Damage/Irritation:

Eye irritant.

Overexposure will cause redness and burning sensation.

Carcinogenicity:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Respiratory or Skin Sensitization:

No data available.

Specific Target Organ Toxicity - Single Exposure:

No data available.

Specific Target Organ Toxicity - Repeated Exposure:

No data available.

Aspiration Hazard:

Aspiration hazard if swallowed.

Acute Toxicity:

Inhalation: effect of overexposure include irritation of respiratory tract, headache, dizziness, nausea, and loss of coordination. Extreme overexposure may result in unconsciousness and possibly death.

0000106-97-8 BUTANE

LC50 (mouse): 202000 ppm (481000 mg/m3) (4-hour exposure); cited as 680 mg/L (2-hour exposure) (9)
LC50 (rat): 276000 ppm (658000 mg/m3) (4-hour exposure); cited as 658 mg/L (4- hour exposure) (9)

SECTION 12) ECOLOGICAL INFORMATION

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Toxicity:

No data available.

Persistence and Degradability:

No data available.

Bio-Accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Water Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Consumer Commodity, ORM-D

IMDG Information:

Consumer Commodity, ORM-D

IATA Information:

Consumer Commodity, ORM-D

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000074-98-6	PROPANE	5% - 11%	SARA312,VOC,TSCA,ACGIH,OSHA
0000106-97-8	BUTANE	2% - 4%	SARA312,VOC,TSCA,ACGIH
0008042-47-5	MINERAL OIL, SLAB OIL	51% - 90%	SARA312,TSCA
0067784-80-9	Soybean oil, Me ester	5% - 10%	SARA312,TSCA

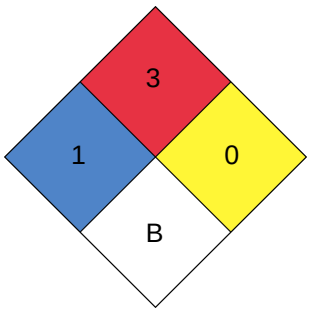
SECTION 16) OTHER INFORMATION

Glossary:

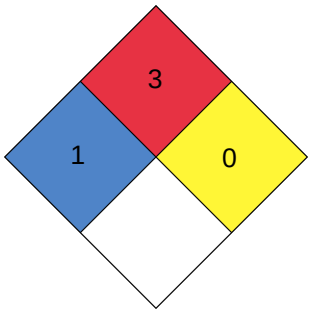
* There are points of differences between OSHA GHS and UN GHS. In 90% of the categories, they can be used interchangeably, but for the Skin Corrosion/Irritant Category and the Specific Target Organ Toxicity (Single and Repeated Exposure) Categories. In these cases, our system will say UN GHS.

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS



NFPA



Chronic : ☐

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This SDS is being provided to your company for the purpose of providing current health and safety information to your management and for your employees who work with this product. Please read the information on these sheets and then provide this information to those people at your company whose responsibility it is to comply with FEDERAL, STATE and COMMUNITY RIGHT TO KNOW regulations. Also, make this information available to any employee who requests it.

If Niagara Lubricant Co., Inc. considers the formula of this product to be a trade secret, the exact chemical names of the ingredient(s) and the percentages in which they are combined will not appear in the body of this sheet. The exact composition is available upon request to physicians, industrial hygienists and other health professionals. For chemical emergencies, spills, leaks, fire or exposure call CHEMTREC (800) 424-9300, in Canada CANUTEC 613-996-6666.

All non-emergency questions should be directed to customer service Phone: (716) 874-2300 Fax: (716) 874-8082 for assistance. Niagara Lubricant Co., Inc. 1057 E Delavan Ave 14215

Truck Lite NYK 77 Lubricant

1. Identification of the substance/preparation and of the company/undertaking

Trade Name: Truck Lite NYK 77 Lubricant
Product Code: 55126NYK

Relevant identified uses of the substance or mixture and uses advised against: Multi-purpose/anti-corrosion grease

Details of the supplier of the safety data sheet:
This Safety Data Sheet has been updated in accordance with the Global Harmonized System (GHS)

Manufacturer/Supplier:
Niagara Lubricant Co., Inc.
1057 E. Delavan Ave
Buffalo, NY 14215
Tel: (716) 874-2300
Fax: (716) 874-8092

Information Department:
SDS Coordinator (716) 874-2300

Emergency telephone number:
See preface at top of page for CHEMTREC

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2. Hazards Identification

Classification of the substance or mixture
Classification according to OSHA regulations (29CFR 1910.1200) (Hazcom 2012)


GHS07

Eye Irrit. 2 H320 Causes eye irritation
Skin Irrit. 2 H315 Causes skin irritation
STOT SE 3 H335+H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Label elements:

Hazard Pictograms:



GHS07

Signal word: Warning

Hazard Determining components of labeling: Petroleum Distillates

Hazard Statements
H320 Causes eye irritation
H315 Causes skin irritation
H335/H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary Statements
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P301/P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305/P351/P338 IF IN EYES: Rinse continually with water for several minutes. Remove contact lenses if easy to do so. Continue rinsing.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:

NFPA ratings
Health: 1
Fire: 1
Reactivity: 0

HMIS ratings
Health: 1
Fire: 1
Reactivity: 0

Other Hazards:
Results of PBT and vPvB assessment
PBT: Data not available
vPvB: Data not available

3. Composition/Information on ingredients

Chemical characterization: Mixture
Description: Proprietary oil blend

CAS No.	Description	% Range
CAS: 64742-54-7 EINECS: 265-157-1	Distillates (petroleum), hydrotr. heavy paraffinic	45 – 50%
CAS: 64742-01-4 EINECS: 265-101-6	Residual oils (petroleum), solvent-refined	40 – 45%
CAS : 1302-78-9 EINECS : 215-108-5	Bentonite; organic clay	0 – 5%
CAS: Proprietary EINECS: Proprietary	Alkyl Quaternary Ammonium Bentonite	5 – 10%

4. First Aid Measures

General Advice: In the case of accident or if you feel ill, seek medical attention.
Inhalation: Avoid breathing vapors or mists. Move to fresh air. Seek medical attention.
Skin contact: Wash immediately with soap and water. If skin irritation persists, seek medical attention.
Eye contact: Rinse thoroughly with water for at least 15 minutes and seek medical attention.
Ingestion: Do not induce vomiting. Seek medical attention immediately.

Information for doctor: Indication of any immediate medical attention and special treatment needed.

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5. Fire Fighting Measures

Suitable extinguishing media: Use foam, CO2, dry chemical or water fog.
Specific hazards: Not applicable
Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.
Extinguishing media which must not be used for safety reasons: Not applicable
Specific methods: Not applicable

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6. Accidental Release Measures

Personal precautions: Ensure adequate ventilation. Avoid contact with skin and eyes
Environmental precautions: Local authorities should be advised if significant spillages cannot be contained. Do not contaminate surface water. Prevent further leakage or spillage.
Methods and material for containment and cleaning up: Package all material in plastic, cardboard or metal containers for disposal in compliance with all federal, state and local regulations.

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See section 13 for disposal information.

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7. Handling and Storage

Handling:
Technical measures/precautions: Use only in area well ventilated area.
Safe handling advice: Avoid breathing vapors.
Storage: Store in a cool, well-ventilated area away from heat, oxidizers and all sources of ignition.
Incompatible products: Oxidizers
Specific end use(s): No further relevant information available.

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8. Exposure Controls/Personal Protection

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages, and feed. Remove all soiled and contaminated clothing.

Engineering measures to reduce exposure: Ensure adequate ventilation.
Respiratory protection: No personal respiratory protective equipment normally required.
Skin and body protection: Avoid contact with skin.
Eye protection: Avoid contact with eyes. If splashes are likely to occur, wear goggles
Hand protection: Preventive skin protection—neoprene gloves.

Control Parameters
PEL: N/A
REL: N/A
TLV: N/A

Additional Information:
PEL/REL = Permissible/Recommended Exposure Limit (OSHA—Occupational Safety and Health Administration)
TLV = Threshold Limit Value (ACGIH—American Conference of Government Industrial Hygienists)

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9. Physical and Chemical Properties

General Information
Appearance: Paste; semi-solid
Odor: Petroleum
Flash Point (method): COC > 399'F
pH @70° F: N/A
Decomposition temperature: Not determined
Auto Ignition: Product will not self-ignite
Explosion Danger: Product is not explosive, however, may form harmful air/vapor mixtures
Explosion Limits:
LEL: Not determined
UEL: Not determined
Water Solubility: negligible
Vapor density: >1 (air = 1)
Evaporation rate: <1 (butyl acetate = 1)
Dropping Point: > 350 F
Specific gravity: 0.978

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10. Stability and Reactivity

Stability: Stable under recommended storage conditions.
Polymerization: None under normal processing.

Conditions to avoid: Heat, static electricity, sparks and other sources of ignition.
Materials to avoid: Strong acids and oxidizing agents.
Hazardous decomposition products: None reasonably foreseeable.

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11. Toxicological Information

Caution: Contains petroleum distillate. Harmful or fatal if swallowed. If swallowed DO NOT induce vomiting. Seek medical attention. Avoid breathing vapors or mists. Skin and eye irritant.

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12. Ecological Information

Toxicity
Aquatic toxicity: No information available
General Notes: Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system.

Results of PBT/vPvB assessment:
PBT (Persistent Bio-accumulative & Toxic): Not determined
vPvB (Very Persistent & Very Bio-accumulative): Not determined

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13. Disposal Considerations

Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations.
Contaminated packaging: Disposal must be made according to local and federal regulations.
Ewc waste disposal no: Not applicable
Further information: According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

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14. Transport Information

General Transportation Statement

DOT non-bulk shipments are non- regulated

IATA non regulated (country variations may apply)

IMDG. non regulated

Other information:

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements and mode-specific or quantity-specific shipping requirements

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15. Regulatory Information

Safety, health, and environmental regulations/legislation specific for the substance or mixture

SARA (Superfund Amendments and Reauthorization Act)
Section 355 (extremely hazardous substances): None of the ingredients are listed.
Section 313 (specific toxic chemical listings): None of the ingredients are listed.

TSCA (Toxic Substances Control Act: Niagara Lubricant Co., Inc. certifies that all components listed below for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSCA section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

Carcinogens: None of the ingredients are listed
Reproductive toxicity: None of the ingredients are listed.

Carcinogenic Categories:
EPA (Enviromental Protection Agency): None of the ingredients are listed
IARC (International Agency for Research on Cancer): None of the ingredients are listed
NTP (National Toxicology Program): None of the ingredients are listed

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16. Other Information

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Niagara Lubricant Co., Inc. **provides the information contained herein in good faith**

but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Niagara Lubricant Co., Inc. **MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY,** Niagara Lubricant Co., Inc. **WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.**

****

Prepared by: Health & Safety
Phone Number: 905 793-4311 (Canada)

Effective Date: ***09/27/16*** * * * * * *Supercedes:* ***7/27/16***

Safety Data Sheet

SECTION 1 IDENTIFICATION

Ultra-Duty HD 0, 1, 2

Recommended Use: Industrial Grease
Restrictions on Use: Consult supplier when used other than those specified.
Other means of identification: Chevron Ultra-Duty Grease EP NLGI 0, 1, 2
Product Number(s): 238011, 238012, 238013
Company Identification
Chevron Products Company
a division of Chevron U.S.A. Inc.
1400 Smith Street
Houston, TX 77002
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency & Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:

- Acute aquatic toxicant: Category 3.
- Chronic aquatic toxicant: Category 3.

Environmental Hazards:
- Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:
Prevention:
- Avoid release to the environment.

Disposal:
- Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

FRS SDS Reference Library | S149 | Library page 1477

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %weight
Distillates (petroleum), hydrotreated middle	64742-46-7	0 - 30 %weight
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	68457-79-4	1 - < 4 %weight
Succinic anhydride, alkylation products with C12-rich branched olefins from propene oligomerisation, hydrolyzed, esterification products with propylene oxide	Not Available	< 1 %weight
Phosphoric acid ester, amine salt	Mixture	< 1 %weight

SECTION 4 FIRST AID MEASURES

Description of first aid measures
Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed
IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.
Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER HEALTH EFFECTS: Not classified

Indication of any immediate medical attention and special treatment needed
Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
UNSUITABLE EXTINGUISHING MEDIA: No data available
Unusual Fire Hazards: Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Lithium, Phosphorus, Sulfur, Zinc.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Observe all relevant local and international regulations. Eliminate all sources of ignition in vicinity of spilled material. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.
Spill Management: Clean up spills immediately, observing precautions in Exposure Controls/Personal Protection section. Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Keep out of the reach of children.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	120
Nitrile	0.8	240
Viton Butyl	0.3	240

Respiratory Protection: A site-specific risk assessment should be conducted by an Occupational Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved respirator such as:

Air purifying respirator -
If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.
Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).
Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).
Refer to respirator manufacturers to obtain service life of cartridge / filter.

Positive pressure air-supplying respirator -
If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

Occupational Exposure Limits:

Component	Agency	Form	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	--	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	--	5 mg/m3	--	--	--
Distillates (petroleum), hydrotreated middle	ACGIH	Inhalable fraction	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Red
Physical State: Semi-solid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: No data available
Relative Vapor Density: No data available
Initial Boiling Point: 260°C (500°F) (Minimum)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: No data available
Melting Point: 165°C (329°F) (Minimum)
Particle Characteristics: No data available
Density: No data available
Kinematic Viscosity: 22 mm2/s @ 100°C (212°F) (Minimum)
Evaporation Rate: No data available
Decomposition temperature: No data available
Partition coefficient n-octanol/water (logarithmic value): No data available

FLAMMABLE PROPERTIES:
Flammability (solid, gas): No Data Available

Flashpoint: (Cleveland Open Cup) 204 °C (399 °F) (Minimum)
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: Alkyl Mercaptans (Elevated temperatures), Hydrogen Sulfide (Elevated temperatures)

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for product components.

Skin Corrosion/Irritation: The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for product components.

Skin Sensitization: The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for product components.

Acute Dermal Toxicity: The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for product components.

Acute Oral Toxicity: The material is not considered an oral toxicant. The product has not been tested. The statement is based on evaluation of data for product components.

Acute Inhalation Toxicity: The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for product components.
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Carcinogenicity: The material is not considered a carcinogen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Reproductive Toxicity: The material is not considered a reproductive toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Single Exposure: The material is not considered a target organ toxicant (single exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Specific Target Organ Toxicity - Repeated Exposure: The material is not considered a target organ toxicant (repeated exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

Aspiration Hazard: The material is not considered an aspiration hazard.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).
These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is expected to be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.
The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is not expected to be readily biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Partition coefficient n-octanol/water (logarithmic value): No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: Not applicable

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	05=MA RTK
01-2A=IARC Group 2A	06=NJ RTK
01-2B=IARC Group 2B	07=PA RTK
02=NTP Carcinogen	08-1=TSCA 5(e)
03=EPCRA 313	08-2=TSCA 12(b)

04=CA Proposition 65

The following components of this material are found on the regulatory lists indicated.
Phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts 03, 06, 07

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), IECSC (China), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Grease)

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
SECTION 01 - Company SDS Address information was modified.
SECTION 01 - Product Synonym information was added.
SECTION 02 - Precautionary Statements information was modified.
SECTION 05 - Fire Fighters Protection Measures information was modified.
SECTION 05 - Special hazards arising from the substance or mixture information was modified.
SECTION 06 - Personal Precautions, Protective Equipment and Emergency Procedures information was modified.
SECTION 08 - Respiratory Protection information was added.
SECTION 08 - Respiratory Protection information was modified.
SECTION 08 - Skin Protection information was modified.
SECTION 15 - Regulatory Information information was modified.

Revision Date: March 18, 2025

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)

DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	PNOS - Particles Not Otherwise Specified

Prepared according to the 29 CFR 1910.1200 (2024) by Chevron.

The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.

Universal Absorbent

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 09/08/2014 Date of issue: 09/08/2014 Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Fabric

Product Name: Universal Absorbent

Product Code: All DB, G, GFF, G2L, HVU, SFG, UBG, UPG, USG, USR, 521040, 521048, SM, DS, TR series products

Synonyms: Roll, Sock, Pillow, Pad, nonwoven

Intended Use of the Product

Designed to absorb all types of liquids(both water based and Oil-Based). Not recommended for aggressive fluids such as acids and bases. For professional use only.

Name, Address, and Telephone of the Responsible Party

Customer

NPS Corporation
3303 Spirit Way
Green Bay, WI 54304
800-558-5066
npscorp.com

Emergency Telephone Number

Emergency number : CHEMTREC: (800) 424-9300 (USA); +1 (703) 527-3887 (International and Maritime)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Not classified

Label Elements

GHS-US Labeling

No labeling applicable

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name	Product identifier	% (w/w)	Classification (GHS-US)
Polypropylene	(CAS No) 9003-07-0	98.9	Not classified

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Not expected to be a primary route of exposure.

Skin Contact: Not expected to present a significant dermal hazard under anticipated conditions of normal use.

Eye Contact: Rinse with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Not expected to be a primary route of exposure.

Skin Contact: Not expected to present a significant dermal hazard under anticipated conditions of normal use.

Eye Contact: May cause eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

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Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product itself is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2).

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: No special measures required.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Eliminate ignition sources. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: None.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep/Store away from direct sunlight, extremely high temperatures, and incompatible materials.

Incompatible Materials: Strong oxidizers.

Specific End Use(s)

Designed to absorb all types of liquids(both water based and Oil-Based). Not recommended for aggressive fluids such as acids and bases. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Exposure Controls

Appropriate Engineering Controls: Ensure all national/local regulations are observed.

Personal Protective Equipment: Not required for normal conditions of use

Materials for Protective Clothing: Not required for normal conditions of use

Hand Protection: Not required for normal conditions of use

Eye Protection: Not required for normal conditions of use

Skin and Body Protection: Not required for normal conditions of use

Respiratory Protection: Not required for normal conditions of use

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Solid
Appearance	:	Gray or green
Odor	:	Odorless
Odor Threshold	:	Not available
pH	:	Not available
Evaporation Rate	:	Not available
Melting Point	:	177 °C (350 °F)
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	625 °C (1157 °F)
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Specific Gravity	:	0.9
Solubility	:	Insoluble
Partition coefficient: n-octanol/water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Extremely high or low temperatures. Incompatible materials. Ignition sources.

Incompatible Materials: Strong oxidizers.

Hazardous Decomposition Products: Carbon oxides (CO, CO_2).

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Not expected to be a primary route of exposure.

Symptoms/Injuries After Skin Contact: Not expected to present a significant dermal hazard under anticipated conditions of normal use.

Symptoms/Injuries After Eye Contact: May cause eye irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Polypropylene (9003-07-0)	
IARC Group	3

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Persistence and Degradability Not available

Bioaccumulative Potential Not available

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT Not regulated for transport

14.2 In Accordance with IMDG Not regulated for transport

14.3 In Accordance with IATA Not regulated for transport

14.4 In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Polypropylene (9003-07-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Neither this product nor its chemical components appear on any US state lists.

Canadian Regulations

Universal Absorbent	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Polypropylene (9003-07-0)
Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

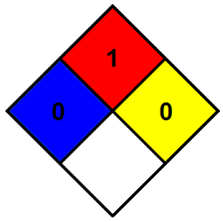
Revision date : 09/08/2014

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

NFPA Health Hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA Fire Hazard : 1 - Must be preheated before ignition can occur.

NFPA Reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Party Responsible for the Preparation of This Document

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Green Bay, WI 54304
8005585066

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: 235883
Product Name: Magic
Revision Date: Nov 27, 2017 **Supersedes Date:** Nov 03, 2016
Version: 1.0
Manufacturer's Name: ZENEX International
Address: 1 Zenex Circle Cleveland, OH, US, 44146
Emergency Phone: 1-800-535-5053
Information Phone: (440) 232-4155
Fax:
Product/Recommended Uses: Hand Soap

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Not classified

Pictograms:

No pictograms available.

Signal Word:

No signal word available.

Hazardous Statements - Physical:

Not classified

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention:

No precautionary statement available.

Precautionary Statements - Response:

No precautionary statement available.

Precautionary Statements - Storage:

No precautionary statement available.

Precautionary Statements - Disposal:

No precautionary statement available.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0007732-18-5	WATER	30% - 50%
N/A	Walnut Shells	15% - 25%
0008001-79-4	CASTOR OIL	5% - 15%
0067784-80-9	Methyl Soyate	5% - 15%

0008042-47-5	Mineral oil	5% - 15%
0068439-46-3	Ethoxylated alcohols (C9 - C11)	0% - 5%
0068585-34-2	(C10-C16) ALCOHOL ETHOXYLATE, SULFATED, SODIUM SALT	0% - 5%

SECTION 4) FIRST-AID MEASURES

Inhalation:

No ill effects expected.

Eye Contact:

If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open. If eye irritation persists: Get medical advice/attention.

Skin Contact:

No ill effects expected. If skin irritation occurs stop using. Get medical advice/attention if condition warrants.

Ingestion:

Rinse mouth. Give two glasses of water. If you feel unwell or if concerned : Get medical advice/attention. Do NOT induce vomiting unless under the advice/direction of doctor/POISON CENTER. Note: Never give anything by mouth to an unconscious or convulsing victim. Keep person warm and quiet.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Will not burn. Use extinguishing material suitable for surrounding fire.

Unsuitable Extinguishing Media:

None.

Fire-Fighting Procedures:

N.A.

Special Protective Actions:

N.A.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

Do not walk through spilled material.
Isolate hazard area and keep unnecessary people away.

Pick up with mop or wet vac. Rinse spill area with water.

Recommended Equipment:

N.A.

Personal Precautions:

N.A.

Environmental Precautions:

Stop spill/release if it can be done safely.

SECTION 7) HANDLING AND STORAGE

General:

Do not get in eyes.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.

Ventilation Requirements:

N.A.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Containers that have been opened must be carefully resealed to prevent leakage.

Store at temperatures between 40°F and 100°F.

FOR INDUSTRIAL AND INSTITUTIONAL USE ONLY. FOR USE BY TRAINED PERSONNEL ONLY. KEEP FROM FREEZING.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection:

N.A.

Skin Protection:

N.A.

Respiratory Protection:

N.A.

Appropriate Engineering Controls:

N.A.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
No applicable chemical	-	-	-	-	-	-	-	-	-	-	-	-

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
No applicable chemical	-	-	-	-

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density VOC	0.07942 lb/gal
Density	8.36022 lb/gal
VOC Regulatory	9.51714 g/l
VOC Regulatory	0.07942 lb/gal
% VOC	0.95000%
VOC Actual	0.07942 lb/gal
VOC Actual	9.51715 g/l

Appearance	Thick brown liquid
Odor Threshold	N.A.
Odor Description	N.A.
pH	7
Water Solubility	Soluble
Flammability	Will not burn.
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Melting Point	N.A.
Vapor Density	N.A.
Freezing Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.
Decomposition Pt	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	N.A.
VOC Composite Partial Pressure	N.A.

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable.

Conditions to Avoid:

None.

Incompatible Materials:

None known.

Hazardous Reactions/Polymerization:

Will not occur.

Hazardous Decomposition Products:

None known.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

No data available

Serious Eye Damage/Irritation:

No data available

Carcinogenicity:

No data available

Germ Cell Mutagenicity:

No data available

Reproductive Toxicity:

No data available

Respiratory/Skin Sensitization:

No data available

Specific Target Organ Toxicity - Single Exposure:

No data available

Specific Target Organ Toxicity - Repeated Exposure:

No data available

Aspiration Hazard:

No data available

Acute Toxicity:

No data available

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No data available

Persistence and Degradability:

No data available.

Bio-Accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Water Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

Not regulated.

IMDG Information:

Not regulated.

IATA Information:

Not regulated.

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0007732-18-5	WATER	30% - 50%	TSCA
N/A	Walnut Shells	15% - 25%	
0008001-79-4	CASTOR OIL	5% - 15%	SARA312,TSCA
0067784-80-9	Methyl soyate	5% - 15%	SARA312,TSCA
0008042-47-5	Mineral oil	5% - 15%	SARA312,TSCA
0068439-46-3	Ethoxylated alcohols (C9 - C11)	0% - 5%	SARA312,TSCA
0068585-34-2	(C10-C16)Alcohol ethoxylate sulfated, sodium salt	0% - 5%	SARA312,TSCA

SECTION 16) OTHER INFORMATION

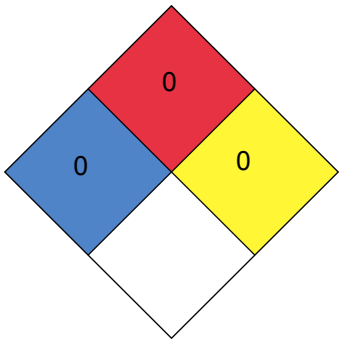
Glossary:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS



NFPA



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