SAFETY DATA SHEET

Easy Task

Section 1. Identification

Product identifier : Easy Task

Product code : 608

Other means of identification : Not available.

Product type : Liquid.

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

Identified uses
Restorer

Uses advised against	Reason
For Industrial and Institutional Use Only	-

Supplier's details : Betco Corporation
1690 Huron Church Road, Suite 169
Windsor ON N9C0AC CA

400 Van Camp Road
Bowling Green, OH 43402 US
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec (800) 424-9300 24 hour

Section 2. Hazard identification

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

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	% (w/w)	CAS number
ethanediol	1 - 5	107-21-1

Section 3. Composition/information on ingredients

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 specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

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 : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Section 5. Fire-fighting measures

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.

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 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. 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. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethanediol	**CA British Columbia Provincial (Canada, 7/2018).** C: 100 mg/m³ Form: Aerosol TWA: 10 mg/m³ 8 hours. Form: Particulate STEL: 20 mg/m³ 15 minutes. Form: Particulate C: 50 ppm Form: Vapour **CA Ontario Provincial (Canada, 1/2018).** C: 100 mg/m³ Form: Aerosol only. **CA Saskatchewan Provincial (Canada, 7/2013).** CEIL: 100 mg/m³ Form: aerosol **CA Alberta Provincial (Canada, 6/2018).** C: 100 mg/m³ **CA Quebec Provincial (Canada, 1/2014).** STEV: 50 ppm 15 minutes. Form: vapour and mist STEV: 127 mg/m³ 15 minutes. Form: vapour and mist

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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 : 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 : Green.

Odor : Fruity.

Odor threshold : Not available.

pH : 8 to 9.5

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: Not applicable. [Product does not sustain combustion.]

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 : 0.9925

Solubility : Easily soluble in the following materials: cold water and hot water.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : 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.

Conditions to avoid : No specific data.

Incompatible materials : Not available.

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
ethanediol	LD50 Oral	Rat	4700 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

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 : Routes of entry anticipated: Oral.
Routes of entry not anticipated: 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 specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

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.

Section 11. Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

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.

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

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethanediol	Acute LC50 6900000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 41000000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ethanediol	-1.36	-	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. 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

	TDG Classification	DOT Classification	ADR/RID	IMDG	IATA
UN number	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.

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 and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: ethylene glycol

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

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 : Not determined.

Canada : Not determined.

China : Not determined.

Europe : At least one component is not listed.

Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): At least one component is not listed.

Malaysia : Not determined

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Section 15. Regulatory information

Taiwan : At least one component is not listed.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : Not determined.

Section 16. Other information

History

Date of printing : 6/3/2020

Date of issue/Date of revision : 6/3/2020

Date of previous issue : 7/30/2019

Version : 1.01

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)
UN = United Nations
HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
Not classified.	

References : Not available.

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.

SAFETY DATA SHEET

Issuing Date: 09-Jan-2015 **Revision Date:** 07-Apr-2015 **Version** 2

1. IDENTIFICATION

Product Name	Comet® Cleaner with Bleach - Ready to Use
Product Code(s)	3-30
Product ID:	15154199_PROF_NG
Product Type:	Finished Product - Professional Use Only
Recommended Use	Hard Surface Cleaner
Restrictions on Use	Do not mix with other cleaning products or chemicals as irritating fumes may be formed.
Manufacturer	Procter & Gamble Professional 2 P&G Plaza Cincinnati, Ohio 45202 Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-332-7787
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category	
Eye Damage / Irritation	Category 2B
Corrosive to metals	Category 1

Signal Word WARNING

Hazard Statements

Causes eye irritation
May be corrosive to metals

Hazard pictograms

Precautionary Statements - Prevention	Wash hands thoroughly after handling Keep only in original container Do not mix with other cleaning products or chemicals as irritating fumes may be formed
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 SWALLOWED: Drink 1 or 2 glasses of water Absorb spillage to prevent material damage
Precautionary Statements - Storage	Store in corrosive resistant container
Precautionary Statements - Disposal	Dispose of contents/container in accordance with local regulation
Hazards not otherwise classified (HNOC)	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Sulfuric acid, monooctyl ester, sodium salt (1:1)	-	No	142-31-4	1 - 5
Sulfuric acid monododecyl ester sodium salt (1:1)	-	No	151-21-3	1 - 5
Sodium hypochlorite	-	No	7681-52-9	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact	Rinse with plenty of water. Get medical attention immediately if irritation persists.
Skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Most important symptoms/effects, acute and delayed	None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical, CO_2, alcohol-resistant foam or water spray.
Unsuitable Extinguishing Media	None.

Special hazard	None known.
Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific hazards arising from the chemical	None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Do not get in eyes, on skin, or on clothing.
Advice for emergency responders	Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	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).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store in corrosive resistant container.
Incompatible products	Do not mix with other cleaning products or chemicals as irritating fumes may be formed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines	No exposure limits noted for ingredient(s).

Exposure controls

Engineering Measures	**Distribution, Workplace and Household Settings:** Ensure adequate ventilation **Product Manufacturing Plant (needed at Product-Producing Plant ONLY):** Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection	**Distribution, Workplace and Household Settings:** No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	clear
Odor	Scented
Odor threshold	No information available

Property	Values	Note
pH value	12.6 - 13.4	
Melting/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	> 93.3 °C / > 200 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits 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	1.045	
Water solubility	100%	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.
Viscosity of Product	No information available < 10 cps	

Oxidizing properties These substances will accelerate burning when involved in a fire.

VOC Content (%) Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Stability Stable under normal conditions.

Hazardous polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

Conditions to Avoid None under normal processing.

Materials to avoid Do not mix with other cleaning products or chemicals as irritating fumes may be formed.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation No known effect.
Skin contact No known effect.
Ingestion No known effect.
Eye contact Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity No known effect.
Skin corrosion/irritation No known effect.
Serious eye damage/eye irritation Irritating to eyes.
Skin sensitization No known effect.
Respiratory sensitization No known effect.
Germ cell mutagenicity No known effect.
Neurological Effects No known effect.
Reproductive toxicity No known effect.
Developmental toxicity No known effect.
Teratogenicity No known effect.
STOT - single exposure No known effect.
STOT - repeated exposure No known effect.
Target Organ Effects No known effect.
Aspiration hazard No known effect.
Carcinogenicity No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid monododecyl ester sodium salt (1:1)	151-21-3	977 mg/kg bw (OECD 401; rat)	> 500 mg/kg bw (Read across data C10-16ASO4, NH4; guideline: Standard Procedure #10; fixed dose procedure; rabbit; based on active ingredient)	-
Sodium hypochlorite	7681-52-9	626 mg/kg bw (Similar to OECD 401; standard acute method; rat)	> 20000 mg/kg bw (Guideline: 16 CFR 1500.40 and similar to OECD 402; rabbit)	> 10.5 mg/L air (Similar to OECD 403; rat; 1 h)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms.

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products Products covered by this MSDS, in their original form, when disposed as waste, are corrosive hazardous waste, D002, according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT

UN no	UN1760
UN Proper shipping name	Corrosive liquids, n.o.s.
Description	UN1760, Corrosive liquid, n.o.s, (sodium hydroxide, sodium hypochlorite), 8,III , Ltd. Qty.
Hazard Class	8
Packing Group	III

IMDG

UN Number	UN1760
UN Proper shipping name	Corrosive liquid, n.o.s.
Description	UN1760, Corrosive liquid, n.o.s , (sodium hydroxide, sodium hypochlorite), 8, III, MARINE POLLUTANT , Ltd. Qty.
Transport hazard class(es)	8
Packing Group	III

IATA

UN no	UN1760
UN Proper shipping name	Corrosive liquid, n.o.s.
Description	UN1760, Corrosive liquid, n.o.s, (sodium hydroxide, sodium hypochlorite), 8,III , Ltd. Qty.
Hazard Class	8
Packing Group	III

15. REGULATORY INFORMATION

U.S. 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

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	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hypochlorite	7681-52-9	100 lb	-	
Sodium hydroxide	1310-73-2	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

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	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite	7681-52-9	100 lb	-	-	X
Sodium hydroxide	1310-73-2	1000 lb	-	-	X

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
Sodium hypochlorite	7681-52-9	X

Chemical Name	CAS-No	Massachusetts
Sodium hypochlorite	7681-52-9	X

Chemical Name	CAS-No	Pennsylvania
Sodium hypochlorite	7681-52-9	X
Sodium hydroxide	1310-73-2	X

Chemical Name	CAS-No	Rhode Island
Sodium hypochlorite	7681-52-9	X

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

HMIS Ratings
Health hazard 2
Flammability 1
Physical hazard 0

NFPA Ratings
Health hazard 2
Flammability 1
Instability 0

Issuing Date: 09-Jan-2015
Revision Date: 07-Apr-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 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 SDS

PROCLEAN

SAFETY DATA SHEET

PROCLEAN CONCENTRATED GLASS CLEANER

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	PROCLEAN CONCENTRATED GLASS CLEANER
Other means of identification	:	Not applicable
Recommended use	:	Glass Cleaner
Restrictions on use	:	Reserved for industrial and professional use.
Product dilution information	:	4.69 % - 4.69 %
Company	:	Ecolab Inc. 1 Ecolab Place St. Paul, Minnesota USA 55102 1-866-444-7450
Emergency health information	:	1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)
Issuing date	:	05/14/2019

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Product AS SOLD
Eye irritation : Category 2B

Product AT USE DILUTION
Not a hazardous substance or mixture.

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
Precautionary Statements : **Prevention:**
Wash hands thoroughly after handling.
Response:
Get medical advice/ attention if you feel unwell.
Storage:
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 (%)
d-glucopyranose, oligomeric, decyl octyl glycosides	68515-73-1	5 - 10

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	:	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	:	Fire residues and contaminated fire extinguishing water must be

methods	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.
Conditions for safe storage	:	Keep out of reach of children. Store in suitable labeled containers.
Storage temperature	:	5 °C to 50 °C

Product AT USE DILUTION

Advice on safe handling	:	Wash hands thoroughly after handling.
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

Contains no substances with occupational exposure limit values.

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	:	blue	light blue
Odor	:	Perfumes, fragrances	Perfumes, fragrances
pH	:	10.4 - 11.7, (100 %)	7.0 - 8.0
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)	:	No data available	
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	:	0.99 - 1.05	
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	:	None known.
Hazardous decomposition products	:	Decomposition products may include the following materials: 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	:	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	:	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	:	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
Skin corrosion/irritation	:	No data available
Serious eye damage/eye irritation	:	Mild eye irritation
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 algae	:	d-glucopyranose, oligomeric, decyl octyl glycosides 72 h EC50: 18 mg/l

Persistence and degradability

Product AS SOLD
Readily biodegradable.

Product AT USE DILUTION
Readily 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	:	Diluted product can be flushed to sanitary sewer.
Disposal considerations	:	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 : 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
d-glucopyranose, oligomeric, decyl octyl glycosides	68515-73-1	Cleaning Agent	Not Applicable
Polyol	Withheld	Cleaning Agent	Not Applicable
Polycarobxylate salt	Withheld	Cleaning Agent	Not Applicable
oxydipropanol	25265-71-8	Fragrance	Not Applicable
Organic acid	Withheld	Buffer	Not Applicable
Coumarin	91-64-5	Fragrance	FRA
1,6-Octadien-3-ol, 3,7-dimethyl-, 3-acetate	115-95-7	Fragrance	Not Applicable
Colorant	Withheld	Dye	Not Applicable
Isothiazolinones	Withheld	Biocide	Not Applicable
Silicone	Withheld	Processing Aid	Not Applicable
Cellulose ether	Withheld	Processing Aid	Not Applicable

*refer to ecolab.com/sds for electronic links to designated lists

The ingredients of this product are reported in the following inventories:

Switzerland. New notified substances and declared preparations :
not determined

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 Inventory of Chemical Substances (AICS) :
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 :
On the inventory, or in compliance with the inventory

Korea. Korean Existing Chemicals Inventory (KECI) :
On the inventory, or in compliance with the inventory

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
On the inventory, or in compliance with the inventory

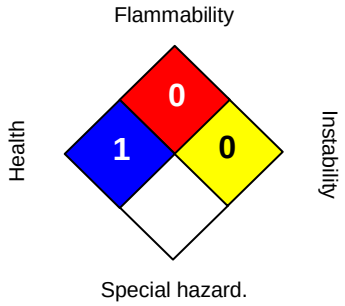
China. Inventory of Existing Chemical Substances in China (IECSC) :
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI) :
not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD

NFPA:



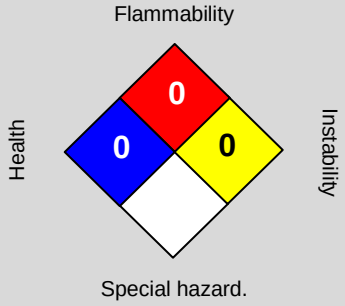
HMIS III:

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	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Issuing date	:	05/14/2019
Version	:	1.2
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 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.

SAFETY DATA SHEET

DC 33

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: DC 33
Product Code: A0151
Recommended Use: Disinfectant/Detergent Cleaner

Company
Auto-Chlor System
746 Poplar Avenue
Memphis, TN 38105
Questions/Comments: 901-579-2300

Emergency Telephone Numbers
MEDICAL: 1-866-923-4946 (PROSAR) **SPILLS:** 1-800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

GHS Hazard Classification

Signal Word: DANGER
Acute Toxicity: Category 4 (oral)
Acute Toxicity: Category 4 (dermal)
Skin Corrosion: Category 1B
Eye Irritation: Category 1

HAZARD STATEMENTS
H314: Causes severe skin burns and eye
H302: Harmful if swallowed
H312: Harmful in contact with skin

PRECAUTIONARY STATEMENTS
P260: Do not breathe mist/vapors or spray
P264: Wash hands thoroughly after handling
P280: Wear eye protection and protective gloves
P301-306: See Section 4 for information
P405: Store locked up
P501: Dispose of contents and container in accordance with local, state and federal regulations
P301/312: If swallowed, call a poison center/doctor if you feel unwell.
P330: Rinse mouth.
P302/P352: If on skin, wash with plenty soap and water.
P362/P364: Take off contaminated clothing and wash it before reuse.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO.	% COMPOSITION*
n-alkyl dimethyl benzyl ammonium chloride	68931-01-5	1 – 5
n-alkyl dimethyl ethylbenzyl ammonium chloride	68956-79-6	1 - 5
Sodium Carbonate	497-19-5	1 - 5
Tetrasodium ethylenediaminetetraacetate	64-02-8	1 – 5
Fragrance	Mixture	<1.0

* Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Remove immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.
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 if you feel unwell.

5. FIREFIGHTING MEASURES

Extinguishing Media: Class A/B/C fire extinguisher, dry chemical, carbon dioxide, or foam
Specific Hazards: None known
Protective Equipment: Wear full protective clothing and self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate spill or leak area immediately. Adequately ventilate area.
Protective Equipment: Wear appropriate personal protective equipment as specified in Section 8.
Cleanup Procedures: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

7. HANDLING AND STORAGE

Handling Precautions: Avoid contact with skin, eyes and clothing. Do not taste or swallow. Wash thoroughly after handling and before eating. Avoid breathing vapors or mists. Remove and wash contaminated clothing and footwear before re-use. FOR INDUSTRIAL AND INSTITUTIONAL USE ONLY.
Storage: Protect from freezing. Store locked up. Keep tightly closed in a dry, cool and well ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: No occupational exposure limits established for this product.
Appropriate Engineering Controls: Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
Eye Protection: Wear protective glasses, goggles or eye shield.
Skin Protection: Wear impervious protective clothing, including gloves and apron.
Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Clear yellow liquid
Odor:
Citrus fragrance
pH:
11.7
Specific Gravity:
1.038 g/ml
Solubility:
Soluble in water
Flash Point:
>200^{o}F
Boiling Point:
212^{o}F
Viscosity:
No information available
Odor Threshold:
No information available

Evaporation Rate:
No information available
Vapor Density:
No information available
Vapor Pressure:
No information available
Partition Coefficient:
No information available
Auto-Ignition Temperature:
No information available
Decomposition Temperature:
No information available
Melting/Freezing Point:
No information available
Flammability:
No information available
Lower Explosive / Upper Explosive:
No information available

10.STABILITY AND REACTIVITY

Stability: Stable under normal conditions
Hazardous Polymerization: Not expected to occur with normal handling and storage
Incompatibility: Strong oxidizing agents and strong acids
Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide and nitrogen oxides

11.TOXICOLOGY INFORMATION

Likely Routes of Exposure: Inhalation, ingestion, eye and skin contact
Acute Symptoms

Eye and Skin Contact:	Corrosive. May cause severe burns.
Ingestion:	Corrosive. May cause burns to mouth, throat and stomach.
Inhalation:	May cause irritation and corrosive effects to nose, throat and respiratory tract.
Chronic Effects:	None known

12.ECOLOGICAL INFORMATION

This product is toxic to fish and aquatic invertebrates.

13.DISPOSAL CONSIDERATIONS

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.

14.TRANSPORT INFORMATION

UN Number:	Not classified
Proper Shipping Name:	Not classified
Hazard Class:	Not classified
Packing Group:	Not classified

15.REGULATORY INFORMATION

EPA REGISTRATION NUMBER: 1839-95-6243

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. The pesticide label also includes other important information, including directions for use, pesticide storage and container handling. Following is the hazard information as required on the pesticide label:

DANGER. KEEP OUT OF REACH OF CHILDREN. CORROSIVE. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, rubber gloves, and protective clothing. Harmful if swallowed. Remove contaminated clothing and wash before reuse. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

California Cleaning Product Right to Know Act of 2017 (SB 258)
This regulation applies to this product.

INGREDIENTS	CAS NO.	FUNCTION
n-alkyl dimethyl benzyl ammonium chloride	68931-01-5	Antimicrobial
n-alkyl dimethyl ethylbenzyl ammonium chloride	68956-79-6	Antimicrobial
Sodium Carbonate	497-19-5	Builder
Tetrasodium ethylenediaminetetraacetate	64-02-8	Chelant
Fragrance*	Mixture	Fragrance

*Contains the following fragrance allergens:

FRAGRANCE ALLERGEN	CAS NO.	PERCENTAGE
d-Limonene	5989-27-5	0.04%
Citral	5392-40-5	0.01%

16.OTHER INFORMATION

Revision Date: 01/10/20
Supersedes: 08/21/18
Reason for Revision: Updated Section 15

Notice to Reader: This Safety Data Sheet has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200

SCRUBBING BUBBLES® DISNFECTANT RESTROOM CLEANER II (EPA 89900-2)

Version *2*.3 Print Date 03/18/2020

Revision Date 03/16/2020 SDS Number 350000021325

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : SCRUBBING BUBBLES® DISNFECTANT RESTROOM CLEANER II (EPA 89900-2)

Recommended use : Hard Surface Cleaner

Restrictions on use : Use only as directed on label

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +1-800-558-5252

Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

Hazard classification	Hazard category	Hazards identification
Gases under pressure	Liquefied gas	Contains gas under pressure; may explode if heated.

Labelling

Precautionary statements

Other hazards : Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.
Excessive exposure to spray mist, fog or vapour may cause respiratory irritation.

SCRUBBING BUBBLES® DISNFECTANT RESTROOM CLEANER II (EPA 89900-2)

Version *2*.3 Print Date 03/18/2020

Revision Date 03/16/2020 SDS Number 350000021325

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Weight percent
Isobutane	75-28-5	5.00 - 10.00
Alkyl dimethyl benzyl ammonium chloride	68424-85-1	0.0001 - 0.10
Decyldimethyloctylammonium chloride	32426-11-2	0.0001 - 0.10
Dimethyldioctylammonium chloride	5538-94-3	0.0001 - 0.10
Didecyldimethylammonium chloride	7173-51-5	0.0001 - 0.10

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

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact : No special requirements

Skin contact : No special requirements

Inhalation : No special requirements.

Ingestion : No special requirements

Most important symptoms and effects, both acute and delayed

Eyes : May irritate eyes.

Skin effect : No adverse effects expected when used as directed.

Inhalation : Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.
Excessive exposure to spray mist, fog or vapour may cause respiratory irritation.

Ingestion : No adverse effects expected when used as directed.

Indication of any immediate medical attention and special treatment needed

See Description of first aid measures unless otherwise stated.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during firefighting : Aerosol Product - Containers may rocket or explode in heat of fire.

Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Remove all sources of ignition.
Wash thoroughly after handling.

Environmental precautions : Outside of normal use, avoid release to the environment.

Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing.
For personal protection see section 8.

KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH STEL

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

Eye protection : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : aerosol

Color : transparent colourless to light yellow

Odour : Marine/Ozone

Odour Threshold : Test not applicable for this product type

pH : 11.0 - 11.8
at (25 C)

see user defined free text

Melting point/freezing point	:	Test not applicable for this product type
Initial boiling point and boiling range	:	95 °C
Flash point	:	Test not applicable for this product type
Evaporation rate	:	Test not applicable for this product type
Flammability (solid, gas)	:	Does not sustain combustion.
Upper/lower flammability or explosive limits	:	Test not applicable for this product type
Vapour pressure	:	Test not applicable for this product type
Vapour density	:	Test not applicable for this product type
Relative density	:	0.99 g/cm3 at 55 °Cestimated
Solubility(ies)	:	completely soluble
Partition coefficient: n-octanol/water	:	Test not applicable for this product type
Auto-ignition temperature	:	not auto-flammable
Decomposition temperature	:	Test not applicable for this product type No data available

Viscosity, dynamic	:	similar to water
Viscosity, kinematic	:	similar to water
Oxidizing properties	:	Test not applicable for this product type
Volatile Organic Compounds Total VOC (wt. %)*	:	6.1 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified :

10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	Direct sources of heat.
Incompatible materials	:	None known.
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 > 10 mg/L

Acute dermal toxicity : LD50 > 5,000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	Oral
Acute toxicity	No classification proposed	Dermal
Acute toxicity	No classification proposed	Inhalation - Dust and Mist
Acute toxicity	No classification proposed	Inhalation - Vapour
Acute toxicity	No classification proposed	Inhalation - Gas
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

Toxicity to fish

Components	End point	Species	Value	Exposure time
Isobutane	LC50 QSAR	Fish	27.98 mg/l	96 h
Alkyl dimethyl benzyl ammonium chloride	LC50 Measured OECD Test Guideline 203	Pimephales promelas (fathead minnow)	0.28 mg/l	96 h
	NOEC	Pimephales promelas (fathead minnow)	0.03 mg/l	34 d
Decyldimethyloctylammonium chloride	No data available			
Dimethyldioctylammonium chloride	semi-static test LC50	Lepomis macrochirus (Bluegill sunfish)	0.28 mg/l	96 h
	flow-through test NOEC	Pimephales promelas (fathead minnow)	18 mg/l	33 d
Didecyldimethylammonium chloride		Pimephales promelas (fathead minnow)	0.19 mg/l	96 h
		Danio rerio (zebra fish)	0.0322 mg/l	34 d

Toxicity to aquatic invertebrates

Components	End point	Species	Value	Exposure time
Isobutane	LC50 QSAR	Daphnid	16.33 mg/l	48 h
Alkyl dimethyl benzyl ammonium chloride	EC50 OECD Test Guideline 202	Daphnia magna (Water flea)	0.016 mg/l	48 h
	NOEC	Daphnia magna	0.0042 mg/l	21 d
Decyldimethyloctylammonium chloride	No data available			
Dimethyldioctylammonium chloride	static test EC50	Daphnia magna (Water flea)	0.066 mg/l	48 h
	flow-through test NOEC	Daphnia magna	0.027 mg/l	21 d
Didecyldimethylammonium chloride	static test EC50	Daphnia magna (Water flea)	0.029 mg/l	48 h
	NOEC	Daphnia magna	0.01 mg/l	21 d

Toxicity to aquatic plants

Components	End point	Species	Value	Exposure

				time
Isobutane	EC50 QSAR	Green algae	8.57 mg/l	96 h
Alkyl dimethyl benzyl ammonium chloride	EC50 OECD Test Guideline 201	Selenastrum capricornutum, Skeletonema costatum	0.026 mg/l	72 h
Decyldimethyloctylammonium chloride	No data available			
Dimethyldioctylammonium chloride	Static NOEC	Desmodesmus subspicatus (green algae)	0.015 mg/l	72 h
Didecyldimethylammonium chloride	EC50	Selenastrum capricornutum, Skeletonema costatum	0.026 mg/l	96 h

Persistence and degradability

Component	**Biodegradation**	**Exposure time**	**Summary**
Isobutane	70 %	< 10 d	Readily biodegradable.
Alkyl dimethyl benzyl ammonium chloride	95.5 %	28 d	Readily biodegradable.
Decyldimethyloctylammonium chloride	No data available		
Dimethyldioctylammonium chloride	No data available		
Didecyldimethylammonium chloride	69 %	28 d	Readily biodegradable.

Bioaccumulative potential

Component	**Bioconcentration factor (BCF)**	**Partition Coefficient n-Octanol/water (log)**
Isobutane	1.57 - 1.97	2.8
Alkyl dimethyl benzyl ammonium chloride	79 Measured	3.91
Decyldimethyloctylammonium chloride	No data available	No data available

Dimethyldioctylammonium chloride	No data available	No data available
Didecyldimethylammonium chloride	81 Measured	2.58

Mobility

Component	End point	Value
Isobutane	No data available	
Alkyl dimethyl benzyl ammonium chloride	No data available	
Decyldimethyloctylammonium chloride	No data available	
Dimethyldioctylammonium chloride	No data available	
Didecyldimethylammonium chloride		-

PBT and vPvB assessment

Component	Results
Isobutane	Not fulfilling PBT and vPvB criteria
Alkyl dimethyl benzyl ammonium chloride	Not fulfilling PBT and vPvB criteria
Decyldimethyloctylammonium chloride	Not fulfilling PBT and vPvB criteria
Dimethyldioctylammonium chloride	Not fulfilling PBT and vPvB criteria
Didecyldimethylammonium chloride	Not fulfilling PBT and vPvB criteria

Other adverse effects **:** None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

SCRUBBING BUBBLES® DISNFECTANT RESTROOM CLEANER II (EPA 89900-2)

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14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

	Land transport	**Sea transport**	**Air transport**
UN number	1950	1950	1950
UN proper shipping name	AEROSOLS, Flammable	AEROSOLS, Flammable	AEROSOLS, Flammable
Transport hazard class(es)	2.1	2	2.1
Packing group	-	-	-
Environmental hazards	-	-	-
Special precautions for user	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Product not transported as bulk.	Product not transported as bulk.	Product not transported as bulk.

15. REGULATORY INFORMATION

FIFRA Labeling

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:

CAUTION:
Causes moderate eye irritation.

CONTENTS UNDER PRESSURE.
Exposure to temperatures above 130° F may cause bursting.
Store in a cool dry well-ventilated place.
Do not use or store near heat or open flame.

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	1
Reactivity	0

NFPA Ratings

Health	1
Fire	1
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

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Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

Section 1: IDENTIFICATION

Product Name: Simple Green® All-Purpose Cleaner
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-rinseable 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 considered hazardous under 2012 OSHA Hazard Communication Standard (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	> 80.698%*
C9-11 Alcohols Ethoxylated	68439-46-3	< 5.000%*
Surfactant	Proprietary	< 5.000%*
Sodium Citrate	68-04-2	< 5.000%*
Sodium Carbonate	497-19-8	< 1.000%*
Tetrasodium Glutamate Diacetate	51981-21-6	< 1.000%*
Citric Acid	77-92-9	< 1.000%*
Blend of Polyoxyalkylene Substituted Chromophores (Cyan and Yellow)	Proprietary Mixture	< 0.100%*
Fragrances	Proprietary Mixture	< 1.000%*
Anethole	104-46-1	< 0.100%*
Eucalyptol	470-82-6	< 0.100%*
Methylchloroisothiazolinone	26172-55-4	< 0.001%*
Methylisothiazolinone	2682-20-4	< 0.0001%*

**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.

Section 4: FIRST-AID MEASURES - continued

Indication of Immediate Medical Attention and Special Treatment Needed, if necessary: Treat symptomatically

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	**Partition Coefficient: n-octanol/water:**	Not determined
Odor:	Added sassafras odor	**Autoignition Temperature:**	Non-flammable
Odor Threshold:	Not determined	**Decomposition Temperature:**	42.7°C (109°F)
pH:	8.5 – 9.2	**Viscosity:**	Like water
Freezing Point:	0-3.33°C (32-38°F)	**Specific Gravity:**	1.01 – 1.03
Boiling Point & Range:	101°C (213.8°F)	**VOCs:**	***Water & fragrance exemption in calculation*

Section 9: PHYSICAL AND CHEMICAL PROPERTIES - continued

Flash Point:	> 212°F	SCAQMD 304-91 / EPA 24:	0 g/L	0 lb/gal	0%
Evaporation Rate:	Not determined	CARB Method 310**:	< 5 g/L	<0.0417lb/gal	<0.5%
Flammability (solid, gas):	Not applicable	SCAQMD Method 313:	Not tested		
Upper/Lower Flammability or Explosive Limits:	Not applicable	**VOC Composite Partial Pressure:**	Not determined		
Vapor Pressure:	0.60 PSI @77°F, 2.05 PSI @100°F	**Relative Density:**	8.42 – 8.59 lb/gal		
Vapor Density:	Not determined	**Solubility:**	100% in water		

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: Non-irritant per Ocular Irritection® assay modeling. No animal testing performed.
Germ Cell Mutagenicity: Mixture does not classify under this category.
Carcinogenicity: Mixture does not classify under this category.
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.

Section 12: ECOLOGICAL INFORMATION - continued

Persistence and Degradability: Readily Biodegradable per OCED 301D, Closed Bottle Test. Reaches 100% biodegradation within 60 days.
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.

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.
IMO / IDMG: Not classified as Hazardous
ICAO/ IATA: 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

This product has been classified as “not classifiable as hazardous” in accordance with Consumer Product Safety Commission (16 CFR Chapter 2) and labelled and packaged accordingly.

US Consumer Product Safety Commission Regulations
This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). However, the use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. Therefore, the requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC, and this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Section 16: OTHER INFORMATION

Size	UPC	Size	UPC
2 fl. oz.	043318131035	67.6 fl. oz.	043318000393
4 fl. oz.	043318130014	67.6 fl. oz.w/ dilution bottle	043318005442
16 fl. oz.	043318130021	140 fl. oz.	043318001390
22 fl. oz.	043318130229	140 fl. oz. w/ dilution bottle	043318001468
24 fl. oz.	043318006241	1 gallon	043318000799
24 fl. oz.	043318130137	1 gallon	043318004957
32 fl. oz.	043318000652	1 gallon	043318130052
32 fl. oz.	043318002557	1 gallon w/ dilution bottle	043318480416
32 fl. oz.	043318130335	1 gallon w/ dilution bottle	043318480492
67.6 fl. oz.	043318130144	2.5 gallon	043318004889

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: Aligned Section 3 with California Ingredient Disclosure and minor fixes.

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 identifier: SPRAYWAY GLASS CLEANER

Other means of identification
SDS number: RE1000000075

Recommended restrictions
Product use: Cleaner
Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name:	Sprayway, Inc.
Address:	1000 INTEGRAM DR. Pacific, MO 63069
Telephone:	1-630-628-3000
Fax:	

Emergency telephone number: 1-866-836-8855

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Gases under pressure	Compressed gas

Label Elements

Hazard Symbol:

Signal Word:	Warning
Hazard Statement:	Contains gas under pressure; may explode if heated.
Precautionary Statements	
Storage:	Protect from sunlight. Store in a well-ventilated place.
Hazard(s) not otherwise classified (HNOC):	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Ethanol	64-17-5	1 - <5%
Ethanol, 2-butoxy-	111-76-2	1 - <5%
Propane	74-98-6	1 - <5%
Butane	106-97-8	1 - <5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: Pressurized container may explode when exposed to heat or flame.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Protect from sunlight. Store in a cool place. Aerosol Level 1

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Ethanol	REL	1,000 ppm 1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (2009)
Ethanol, 2-butoxy-	TWA	20 ppm	US. ACGIH Threshold Limit Values (2008)
	REL	5 ppm 24 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	50 ppm 240 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	25 ppm 120 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Propane	REL	1,000 ppm 1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Butane	REL	800 ppm 1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (03 2018)
	TWA	800 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Morpholine	REL	20 ppm 70 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	30 ppm 105 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	20 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA	20 ppm 70 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	30 ppm 105 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

	PEL	20 ppm	70 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
2-Propanol, 2-methyl-	STEL	150 ppm	450 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	100 ppm	300 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	100 ppm	300 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	100 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	150 ppm	450 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	100 ppm	300 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Silica	REL		6 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA		20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA		6 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA		0.8 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
2,6-Octadienal, 3,7-dimethyl- - Inhalable fraction and vapor.	TWA	5 ppm		US. ACGIH Threshold Limit Values (01 2010)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Ethanol, 2-butoxy- (Butoxyacetic acid (BAA), with hydrolysis: Sampling time: End of shift.)	200 mg/g (Creatinine in urine)	ACGIH BEL (03 2013)

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: No data available.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices.

9. Physical and chemical properties

Appearance

Physical state: liquid
Form: Spray Aerosol
Color: No data available.
Odor: No data available.
Odor threshold: No data available.
pH: 8.7 - 9.7
Melting point/freezing point: No data available.
Initial boiling point and boiling range: No data available.

Flash Point:	Not applicable
Evaporation rate:	No data available.
Flammability (solid, gas):	Non-flammable Aerosol
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	5,515 - 6,894 hPa (20 °C)
Vapor density:	No data available.
Density:	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	No data available.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 36,844.23 mg/kg

Dermal
Product: ATEmix: 32,120.9 mg/kg

Inhalation
Product: ATEmix: 690.87 mg/l
ATEmix : 172.72 mg/l

Repeated dose toxicity
Product: No data available.

Specified substance(s):

Ethanol	NOAEL (Rat(Male), Oral, 7 - 14 Weeks): 10 %(m) Oral Experimental result, Key study
Ethanol, 2-butoxy-	NOAEL (Rat(Female), Inhalation, 2 yr): < 31 ppm(m) Inhalation Experimental result, Key study NOAEL (Rat(Female), Oral, 90 d): < 82 mg/kg Oral Experimental result, Key study NOAEL (Rabbit(Female, Male), Dermal, 90 d): > 150 mg/kg Dermal Experimental result, Key study
Propane	NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study
Butane	LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):

Ethanol	in vivo (Rabbit): Not irritant Experimental result, Key study
Ethanol, 2-butoxy-	in vivo (Rabbit): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation
Product: No data available.

Specified substance(s):

Ethanol	Rabbit, 1 - 24 hrs: Not irritating
Ethanol, 2-butoxy-	Rabbit, 24 - 72 hrs: Irritating

Respiratory or Skin Sensitization
Product: No data available.

Specified substance(s):

Ethanol	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Ethanol, 2-butoxy-	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):

Ethanol	LC 50 (Pimephales promelas, 96 h): 15.3 g/l Experimental result, Key study
Ethanol, 2-butoxy-	LC 50 (Oncorhynchus mykiss, 96 h): 1,474 mg/l Experimental result, Key study
Propane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Butane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study

Aquatic Invertebrates
Product: No data available.

Specified substance(s):

Ethanol	LC 50 (Ceriodaphnia dubia, 48 h): 5,012 mg/l Experimental result, Key study
Ethanol, 2-butoxy-	EC 50 (Daphnia magna, 48 h): 1,550 mg/l Experimental result, Key study
Butane	LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Ethanol	NOAEL (Oryzias latipes): 7,900 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study
Ethanol, 2-butoxy-	NOAEL (Danio rerio): > 100 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Ethanol	LC 50 (Daphnia magna): 454 mg/l Experimental result, Key study NOAEL (Daphnia magna): 9.6 mg/l Experimental result, Key study
Ethanol, 2-butoxy-	EC 10 (Daphnia magna): 134 mg/l Experimental result, Key study EC 50 (Daphnia magna): 297 mg/l Experimental result, Key study

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Ethanol	95 % Detected in water. Experimental result, Key study
Ethanol, 2-butoxy-	90.4 % Detected in water. Experimental result, Key study
Propane	100 % (385.5 h) Detected in water. Experimental result, Key study 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
Butane	100 % (385.5 h) Detected in water. Experimental result, Key study

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Ethanol	Cyprinus carpio, Bioconcentration Factor (BCF): 4.5 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Supporting study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Ethanol	No data available.
Ethanol, 2-butoxy-	No data available.
Propane	No data available.
Butane	No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Wash before disposal. Dispose to controlled facilities.

Contaminated Packaging: No data available.

14. Transport information

DOT

UN Number:	UN 1950
UN Proper Shipping Name:	Aerosols, non-flammable
Transport Hazard Class(es)	
Class:	2.2
Label(s):	–
Packing Group:	II
Marine Pollutant:	No
Environmental Hazards:	No
Marine Pollutant	No
Special precautions for user:	Not regulated.

IMDG

UN Number:	UN 1950
UN Proper Shipping Name:	Aerosols, non-flammable
Transport Hazard Class(es)	
Class:	2
Label(s):	–
EmS No.:	
Packing Group:	–
Environmental Hazards:	No
Marine Pollutant	No
Special precautions for user:	Not regulated.

IATA

UN Number:	UN 1950
Proper Shipping Name:	Aerosols, non-flammable
Transport Hazard Class(es):	
Class:	2.2
Label(s):	–
Packing Group:	–
Environmental Hazards:	No
Marine Pollutant	No
Special precautions for user:	Not regulated.
Cargo aircraft only:	Allowed.

15. Regulatory information

US Federal Regulations

Restrictions on use: Not known.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Ethanol	lbs. 100
Propane	lbs. 100
Butane	lbs. 100
Morpholine	lbs. 100
Nitrous acid, sodium salt (1:1)	lbs. 100
2-Propanol, 2-methyl-	lbs. 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Not listed.

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
Ethanol	lbs. 100
Ethanol, 2-butoxy-	
Propane	lbs. 100
Butane	lbs. 100
Morpholine	lbs. 100
Nitrous acid, sodium salt (1:1)	lbs. 100
2-Propanol, 2-methyl-	lbs. 100

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Ethanol	10000 lbs
Ethanol, 2-butoxy-	10000 lbs
Propane	10000 lbs
Butane	10000 lbs
Morpholine	10000 lbs
Nitrous acid, sodium salt (1:1)	10000 lbs
2-Propanol, 2-methyl-	10000 lbs
Silica	10000 lbs
2,6-Octadienal, 3,7-dimethyl-	10000 lbs

SARA 313 (TRI Reporting)

Chemical Identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
Ethanol, 2-butoxy-	N230 lbs	N230 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Ethanol
Ethanol, 2-butoxy-
Propane
Butane

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Ethanol
Ethanol, 2-butoxy-
Propane
Butane

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Ontario Inventory:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	Not in compliance with the inventory.
Mexico INSQ:	Not in compliance with the inventory.
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.
Philippines PICCS:	Not in compliance with the inventory.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	Not in compliance with the inventory.

16.Other information, including date of preparation or last revision

Issue Date:	03/18/2020
Revision Information:	No data available.
Version #:	2.0
Further Information:	No data available.
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.

Safety Data Sheet

1 - Identification

Product Name: 3-IN-ONE® All-Temp Silicone **Product Use: Lubricant, Protectant** **Restrictions on Use: None identified** **SDS Date Of Preparation: July 18, 2018**	**Manufacturer: WD-40 Company** **Address: 9715 Businesspark Avenue San Diego, California, USA 92131** **Telephone:** **Emergency: 1-888-324-7596** **Information: 1-888-324-7596** **Chemical Spills: 1-800-424-9300 (Chemtrec)** **1-703-527-3887 (International Calls**

2 – Hazards Identification

Hazcom 2012/GHS Classification:
Flammable Liquid Category 4
Aspiration Toxicity Category 1

Note: 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.

Label Elements:

DANGER!
Combustible Liquid.
May be fatal if swallowed and enters airways.
Prevention
Keep away from flames and hot surfaces. -No smoking.
Wear protective gloves.
Response
IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
In case of fire: Use water fog, dry chemical, carbon dioxide or foam to extinguish.
Storage
Store in a well-ventilated place. Keep cool.
Store locked up.
Disposal
Dispose of contents and container in accordance with local and national regulations.

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
LVP Aliphatic Hydrocarbon	64742-47-8	85-95%	Flammable Liquid Category 4 Aspiration Toxicity Category 1
Poly(dimethylsiloxane)	63148-62-9	1-5%	Not Hazardous

Note: The exact percentages are a trade secret.

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.
Signs and Symptoms of Exposure: Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation.
Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

5 – Fire Fighting Measures

Suitable (and unsuitable) Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Specific Hazards Arising from the Chemical: Combustible liquid and vapor. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.
Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water.

6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.
Methods and Materials for Containment/Cleanup: Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use with adequate ventilation. Keep away from heat, sparks, hot surfaces and open flames. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children.
Conditions for Safe Storage: Store in a cool, well-ventilated area, away from incompatible materials. NFPA 30 Class IIIA Liquid.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
LVP Petroleum Distillates, hydrotreated light	1200 mg/m3 TWA (manufacturer recommended)
Poly(dimethylsiloxane)	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product
Appropriate Engineering Controls: Use in a well-ventilated area.
Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact.
Skin Protection: Avoid prolonged skin contact.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended
Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below the occupational exposure limits.
Personal Protection:
Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Appearance:	Light brown liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 5.0%
Odor:	Mild odor	Vapor Pressure:	0.07 mmHg @ 68°F (20°C)
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.76-0.84
Melting/Freezing Point:	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	430 - 520°F (221 - 271°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	191°F (88.3°C) Tag Closed Cup	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas):	Not Applicable	Viscosity:	3.8 cSt @ 104°F (40°C)
VOC:	<7.64-8.4 g/L (<1%)	Pour Point:	-39°C (-38°F)

10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions
Chemical Stability: Stable
Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition.
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

Symptoms of Overexposure:
Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
Chronic Effects: None expected.
Carcinogen Status: None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.
Reproductive Toxicity: None of the components is considered a reproductive hazard.

Numerical Measures of Toxicity:
The oral toxicity of this product is estimated to be greater than 5,000 mg/kg and the dermal toxicity greater than 2000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

12 – Ecological Information

Ecotoxicity: LVP Petroleum Distillates, hydrotreated light and poly(dimethylsiloxane) are not expected to be harmful to aquatic organisms.

Persistence and Degradability: LVP Petroleum Distillates, hydrotreated light) is expected to be readily biodegradable.
Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients.
Mobility in Soil: No data available
Other Adverse Effects: None known

13 - Disposal Considerations

If this product becomes a waste, it would not be expected to meet the criteria of a RCRA hazardous waste. However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: Excepted from Hazmat (49CFR 173.150 (F)) in non-bulk packagings
Bulk Packagings: NA1993, Combustible Liquid, n.o.s. (contains Petroleum Distillates), PG III
IMDG Shipping Description: Not Regulated
ICAO Shipping Description: Not Regulated

NOTE: WD-40 Company does not test containers to assure that they can withstand the pressure change without leakage when transported by air. We do not recommend that our products be transported by air unless a specific review is conducted.

15 – Regulatory Information

U.S. Federal Regulations:
CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Refer to Section 2 for the OSHA Hazard Classification.
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not require a California Proposition 65 warning.
VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.
Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.

16 – Other Information

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 2 (moderate hazard), Physical Hazard – 0 (minimal hazard)

Revision Date: July 18, 2018 Supersedes: April 4, 2018

Revision Summary: Address and telephone number update in Section 1.

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA
Reviewed By: I. Kowalski Regulatory Affairs Manager

1080200/No.0082904

MATERIAL SAFETY DATA SHEET

Prepared according to the WHMIS, ANSI, NOHSC, ACC, OSHA & 2001/58/EC standards. | Revision 1.1 | 11/01/06

1. PRODUCT IDENTIFICATION

1.1	Product Name:	**303 AEROSPACE PROTECTANT™**
1.2	Chemical Name:	See ingredients listed in section 2
1.3	Synonyms:	None reported by the manufacturer
1.4	Trade Names:	303 AEROSPACE PROTECTANT
1.5	Product Use:	Protectant
1.6	Manufacturer's Name:	303 Products, Inc.
1.7	Manufacturer's Address:	10801 Starwood Drive, Palo Cedro, CA 96073
1.8	Business Phone:	+1 (530) 549-5617
1.9	Emergency Phone:	**CHEMTREC +1 (800) 424-9300 / +1 (703) 527-3887**

CHEMICAL RESPONSE CARD:

RESPONSE TEAM PPE:				
WHMIS:				
HEALTH:				**1**
FLAMMABILITY:				**0**
REACTIVITY:				**0**
PERSONAL PROTECTION:				**B**

2. IDENTIFICATION OF RISKS

2.1	Hazard Identification:	This product is not classified as a hazardous substance or as dangerous goods according to the classification criteria of NOHSC and the ADG Code (Australia). In the event of an exposure or medical inquiry involving this product, please contact a physician or local poison control center, who may seek advice from CHEMTREC or the U.S. manufacturer, and show them this Material Safety Data Sheet.
2.2	Routes of Entry:	**INHALATION:** NO | **SKIN & EYES**: YES | **INGESTION**: YES
2.3	Effects of Exposure:	**EYES**: Possible irritation and burning sensation. **SKIN**: Possible irritation and dermatitis (rash). **INGESTION**: Possible gastrointestinal irritation, nausea, vomiting or diarrhea. **INHALATION**: No adverse health effects expected.
2.4	Symptoms of Exposure:	**EYES**: Irritation and burning sensation. **SKIN**: Possible irritation and dermatitis (rash), characterized by red, dry, itching skin. **INGESTION**: Gastrointestinal discomfort, nausea, vomiting, and headache. **INHALATION**: No adverse health effects expected.
2.5	Acute Health Effects:	**EYES**: Irritation. **SKIN**: Possible irritation and dermatitis (rash). **INGESTION**: Possible gastrointestinal irritation, nausea, vomiting or diarrhea. **INHALATION**: No adverse health effects expected.
2.6	Chronic Health Effects:	None known.
2.7	Target Organs:	None reported by the manufacturer.
2.8	Toxicological Properties:	None reported by the manufacturer.

3. COMPOSITION & INGREDIENTS

COMPOSITION	CAS No.	RTECs No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m³)					
					ACGIH - ppm		OSHA - ppm			OTHERS
					TLV	STEL	PEL	STEL	IDLH	
Trade Secret	NA	NA	NA	NA	NA	NA	NA	NA	NA	

4. FIRST AID

4.1	First Aid:	**EYES**: Flush eyes thoroughly with copious amounts of water for at least 20 minutes, holding eyelids open to ensure complete flushing. If irritation persists, contact a physician. **SKIN**: Wash affected areas with soap and water. If irritation persists, contact a physician. Launder clothing before reuse. **INGESTION:** If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. **INHALATION**: Remove victim to fresh air at once.
4.2	Medical Conditions Aggravated by Exposure:	None known.

5. FIRE & EXPLOSION HAZARDS

5.1	Flashpoint & Method:	Not flammable.			
5.2	Autoignition Temperature:	Not Applicable			
5.3	Flammability Limits:	Lower Explosive Limit (LEL):	Not Applicable	Upper Explosive Limit (UEL):	Not Applicable
5.4	Fire & Explosion Hazards:	None known.			
5.5	Extinguishing Methods:	CO_2, sand, dry chemical or other approved fire extinguishing media, foam, and indirect water spray or fog.			
5.6	Firefighting Procedures:	Poses no unusual fire or explosion hazard. Keep containers cool until well after the fire is out. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters should wear full-face, self-contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and impervious clothing.			

6. SPILLS & LEAKS

6.1	Spills:	Secure spill area and maximize ventilation. Stop spill or leak at source if safely possible. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment. Recover free liquid or cover with inert absorbent material and place into appropriate container(s) for disposal. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers or any natural waterway or drinking supply.

7. STORAGE & HANDLING

7.1	Work & Hygiene Practices:	Use normal hygiene practices. Avoid breathing vapors. Avoid direct skin contact. Wash hands thoroughly after using this product and before eating, drinking, or smoking.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated area. Keep away from excessive heat, open flames, sparks, and other possible sources of ignition. Do not store in unmarked containers or storage devices.
7.3	Special Precautions:	Readily available emergency fire, first aid, and spill response equipment and/or measures are highly recommended.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls:	General mechanical ventilation is sufficient for use with this product. Local exhaust is recommended in enclosed or confined spaces.
8.2	Respiratory Protection:	A respiratory protection program that meets ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.
8.3	Eye Protection:	Safety glasses with side shields should be used with this product. If splashing is anticipated, splash goggles and a faceshield are recommended.
8.4	Hand Protection:	Where contact is likely, impervious gloves are recommended. Do not wear rings, watches, or jewelry that could entrap the material against the skin.
8.5	Body Protection:	None required under normal conditions.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	1.01 - 1.02
9.2	Boiling Point:	≥ 100 °C
9.3	Melting Point:	≤ 1.0 °C
9.4	Evaporation Rate:	≤ 1.0 (water = 1)
9.5	Vapor Pressure @ 20°C:	17 mm Hg
9.6	Molecular Weight:	Not Available
9.7	Appearance & Colour:	Milky, white liquid
9.8	Odour Threshold:	Mild odor
9.9	Solubility:	Fully soluble
9.10	pH:	9.79
9.11	Viscosity:	Not Available
9.12	Coefficient Oil/Water Distribution:	Not Available
9.13	Additional Information:	Vapor density 3.2 (Air =1.0)

10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal conditions.
10.2	Decomposition Products:	Heat and carbon dioxide.
10.3	Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Close proximity to incompatible substances (e.g., alkalies, strong oxidizers).
10.5	Incompatible Substances:	None reported by the manufacturer.

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data:	No general or specific toxicity data has been reported by the manufacturer other than the information presented in Section 2. However, good personal hygiene practices, such as washing any skin contact areas and removing contaminated clothing, are recommended.
11.2	Acute Toxicity:	See section 2.5
11.3	Chronic Toxicity:	See section 2.6
11.4	Suspected Carcinogen:	No
11.5	Reproductive Toxicity:	This product is not expected to cause reproductive harm in humans.
	Mutagenicity:	This product is not expected to cause mutagenic effects in humans.
	Embryotoxicity:	This product is not expected to cause embryotoxic effects in humans.
	Teratogenicity:	This product is not expected to cause teratogenic effects in humans.
	Reproductive Toxicity:	This product is not expected to cause reproductive harm in humans.
11.6	Irritancy of Product:	Not Available
11.7	Biological Exposure Indices:	Not Available
11.8	Medical Recommendations:	Treat symptomatically.

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	The manufacturer has not reported detailed studies on the environmental fate of the material. However, prudent practice would dictate the material not be allowed to enter the environment.
12.2	Effect on Plants & Animals:	The manufacturer has not reported any plant and animal effects.
12.3	Effect on Aquatic Life:	The manufacturer has not reported any aquatic life effects.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Dispose of in accordance with regional, federal, state & provincial hazardous waste laws.
13.2	Special Considerations:	Refer to manufacturer/supplier for information on recovery/recycling. If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local ordinance or other statute.

14. TRANSPORTATION INFORMATION

14.1	49 CFR (GND):	NOT REGULATED
14.2	IATA (AIR):	NOT REGULATED
14.3	IMDG (OCN):	NOT REGULATED
14.4	TDGR (Canada GND):	NOT REGULATED
14.5	ADR/RID (EU):	NOT REGULATED
14.6	MEXICO (SCT):	NOT REGULATED

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: This product does not contain any substances subject to SARA Title III reporting requirements.
15.2	SARA Threshold Planning Quantity: Not applicable
15.3	TSCA Inventory Status: All components of this product are listed in the TSCA Inventory or are exempt.
15.4	CERCLA Reportable Quantity (RQ): Not Applicable
15.5	Other Federal Requirements: Not Applicable
15.6	Other Regulations This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.
15.7	State Regulatory Information: Ingredients in this mixture are not found on any of the following state criteria lists: California OSHA Hazardous Substances List, California Proposition 65, Delaware Air Quality Management List, Florida Toxic Substances List, Massachusetts Hazardous Substances List, Michigan Critical Substances List, Minnesota Hazardous Substances List, New Jersey Right to Know Hazardous Substances List, Pennsylvania Hazardous Substances List, Wisconsin Hazardous Substances List.
15.8	67/548/EEC (European Union) Requirements: The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC. Safety Phrases (S): 2-3/9-20/21-45-59 – Keep out of the reach of children. Keep in a cool, well ventilated place. When using, do not eat, drink or smoke. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Refer to manufacturer/supplier for information on recovery/ recycling.

16. OTHER INFORMATION

16.1	Other Information:	Repels dust, soiling & staining. Protects against UV and ozone deterioration. Use on vinyl & leather interiors, vinyl convertible tops, boats seats, clear vinyl & Lexan windows, spa & pooli covers, inflatable boats, canoes, kayaks, car bras, tonneau covers, door and trunk seals, tires, fenders flares, bumpers, trim, lenses, motorcycles, bicycles, ATV´s, personal watercraft, snow mobiles, wetsuits, diving equipment, latex rubber, plastic furniture. Not for textiles, unfinished leathers or floors.
16.2	Terms & Definitions:	Please see last page of this Material Safety Data Sheet.
16.3	Disclaimer:	This Material Safety Data Sheet complies with U.S. OSHA's Hazard Communication Standard, 29 CFR §1910.1200 and Health Canada's Workplace Hazardous Materials Information System (WHMIS. To the best of ShipMate's or 303 Products' knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product. For additional information regarding use, storage and handling or disposal, contact the manufacturer.

16.4 Prepared for:

303 Products, Inc.
10801 Starwood Drive
Palo Cedro, CA 96073-0966
Phone: +1 (530) 549-5617
Web: http://www.303products.com/

16.5 Prepared by:

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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number

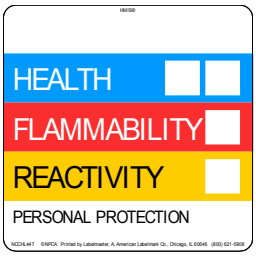
EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.

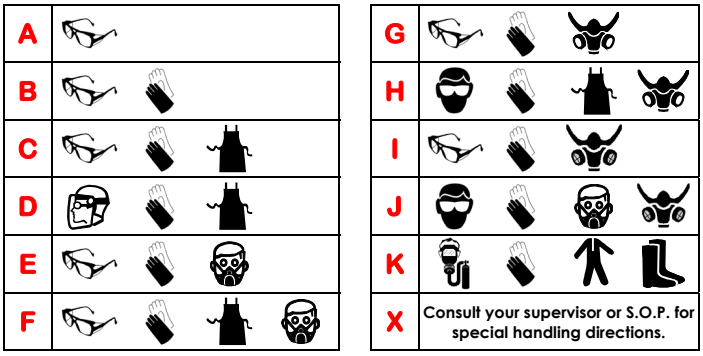
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

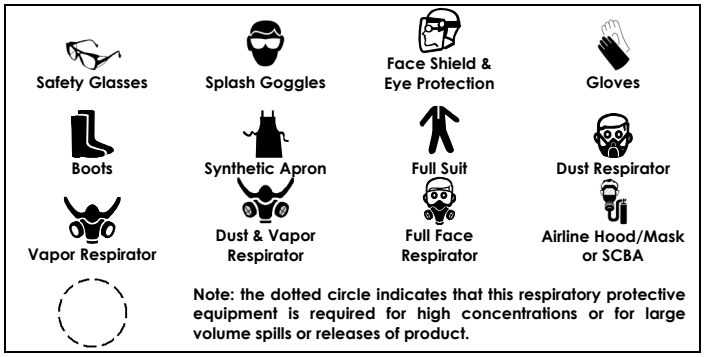


HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

PERSONAL PROTECTION RATINGS:





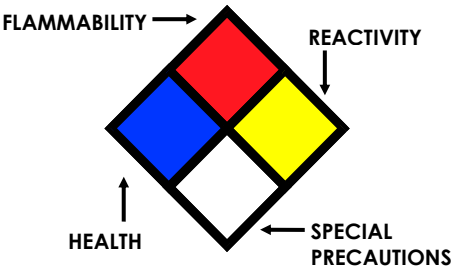
OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source



HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

ACD	Acidic
ALK	Alkaline
COR	Corrosive
~~W~~	Use No Water
OX	Oxidizer

TOXICOLOGICAL INFORMATION:

LD_{50}	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s
LC_{50}	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD_{lo}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD_{lo}, LD_{lo}, & LD_o or TC, TC_o, LC_{lo}, & LC_o	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{OW} or log K_{OC}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHIMS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
TSCA	U.S. Toxic Substance Control Act

Material Safety Data Sheet

PRODUCT NAME: 3M™ Bondo Lightweight Body Filler 261, 261C, 262, 262C, 262ES, 262T, 262W, 265, 265C, 265ES, 265L, 265W, 267, 267C
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 09/22/09
Supercedes Date: 05/14/09

Document Group: 24-2445-5

ID Number(s):

60-4550-4828-4, 60-4550-4829-2, 70-0080-0006-2, 70-0080-0007-0, 70-0080-0008-8, 70-0080-0044-3, 70-0080-0045-0, 70-0080-0047-6, 70-0080-0048-4, 70-0080-0052-6, 70-0080-0056-7, 70-0080-0058-3, 70-0080-0059-1

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

24-2444-8, 24-2136-0

Revision Changes:
Kit: Component document group number(s) was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M 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. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a

particular purpose and suitable for user's method of use or application.

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Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Bondo(r) Lightweight Body Filler 260, 261, 261C, 261E, 262, 262C, 262ES, 262L, 262T, 262W, 263, 264, 264S, 265, 265C, 265ES, 265T, 265W, 267, 267C
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 02/08/11
Supercedes Date: 01/14/11

Document Group: 24-2444-8

Product Use:
Intended Use: Automotive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
1,3-ISOBENZOFURANDIONE, POLYMER WITH 2,5-FURANDIONE AND 2,2'-OXYBIS[ETHANOL]	26123-45-5	15 - 40
TALC	14807-96-6	10 - 30
STYRENE MONOMER	100-42-5	10 - 30
MAGNESIUM CARBONATE	546-93-0	7 - 15
SODIUM SILICATE	1344-09-8	3 - 7
LIMESTONE	1317-65-3	1 - 5
QUATERNARY AMMONIUM COMPOUNDS, BIS(HYDROGENATED TALLOW ALKYL)DIMETHYL, SALTS WITH MONTMORILLONITE	68911-87-5	1 - 5
CHLORITE (MINERAL)	1318-59-8	0.1 - 2.0
TITANIUM DIOXIDE	13463-67-7	0.1 - 1.0
QUARTZ SILICA	14808-60-7	0.1 - 1.0

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Thick fiberous paste, styrene odor
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause severe eye irritation. May cause severe skin irritation. May cause target organ effects. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Skin Contact:
Severe Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Inhalation:
Intentional concentration and inhalation may be harmful or fatal.

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

Prolonged or repeated exposure may cause:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

May be absorbed following inhalation and cause target organ effects.

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

May be absorbed following ingestion and cause target organ effects.

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.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Prolonged or repeated exposure may cause:

Immunological Effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and /or respiratory reaction, and changes in immune function.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Ingredient	C.A.S. No.	Class Description	Regulation
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
STYRENE MONOMER	100-42-5	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	80 °F - 82 °F [*Test Method:* Closed Cup]
Flash Point	26.67 - 27.78 °C [*Test Method:* SETAFLASH]
Flammable Limits(LEL)	0.9 %
Flammable Limits(UEL)	6.8 %

OSHA Flammability Classification: Class IC Flammable Liquid

5.2 EXTINGUISHING MEDIA
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. 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. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

6.2. Environmental precautions
For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods
Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Seal the container.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. No smoking while handling this material. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Do not breathe dust. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact. Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
Indirect Vented Goggles
.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA)
Polymer laminate
.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Do not breathe dust.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters
. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
LIMESTONE	OSHA	TWA, respirable fraction	5 mg/m3	
LIMESTONE	OSHA	TWA, as total dust	15 mg/m3	
MAGNESIUM CARBONATE	OSHA	TWA, respirable fraction	5 mg/m3	
MAGNESIUM CARBONATE	OSHA	TWA, as total dust	15 mg/m3	
QUARTZ SILICA	ACGIH	TWA, respirable fraction	0.025 mg/m3	
QUARTZ SILICA	OSHA	TWA concentration, respirable	0.1 mg/m3	
QUARTZ SILICA	OSHA	TWA concentration, as total dust	0.3 mg/m3	
SILICA, AMORPHOUS	OSHA	TWA concentration	0.8 mg/m3	

SILICA, AMORPHOUS	OSHA	TWA	20 millions of particles/cu. ft.
STYRENE MONOMER	ACGIH	TWA	20 ppm
STYRENE MONOMER	ACGIH	STEL	40 ppm
STYRENE MONOMER	OSHA	TWA	100 ppm
STYRENE MONOMER	OSHA	CEIL	200 ppm

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	Thick fiberous paste, styrene odor
General Physical Form:	Liquid
Autoignition temperature	*No Data Available*
Flash Point	80 °F - 82 °F [*Test Method:* Closed Cup]
Flash Point	26.67 - 27.78 °C [*Test Method:* SETAFLASH]
Flammable Limits(LEL)	0.9 %
Flammable Limits(UEL)	6.8 %
Boiling Point	293.00 °F [*Details:* CONDITIONS: (Styrene)]
Density	9.5126 lb/gal
Density	1.14 g/ml
Vapor Density	*No Data Available*
Vapor Pressure	5.2 mmHg [*Details:* CONDITIONS: at 20 C]
Specific Gravity	1.14 [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*No Data Available*
Solubility in Water	Nil
Evaporation rate	*No Data Available*
Hazardous Air Pollutants	17.8 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	203 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Volatile Organic Compounds	17.8 % weight [*Test Method:* calculated per CARB title 2]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	21.03 %
VOC Less H2O & Exempt Solvents	204 g/l [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	1.71 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
None known

10.2 Materials to avoid
Strong acids
Strong bases
Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Hydrocarbons	Not Specified
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Styrene Oxide	Not Specified
Toxic Vapor, Gas, Particulate	Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
41-0003-6562-1, 41-3701-1570-5

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

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
STYRENE MONOMER	100-42-5	10 - 30

STATE REGULATIONS
Contact 3M for more information.

CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	SEQ677	**Carcinogen

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

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

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 **Flammability:** 3 **Reactivity:** 1 **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.

Reason for Reissue: The MSDS has been revised because 3M has adopted the 16-section ANSI/ISO format. The potential hazards of the product have not changed. We encourage you to reread the MSDS and review the information.

Revision Changes:
Section 8: Skin protection - recommended gloves information was modified.
Section 2: Ingredient table was modified.

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Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Bondo Red Cream Hardener 307, 913, 913M, 913C, 913ES, 928, 928C, 9307, 7653079, 810505D, 510506D, 810507D
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket

ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/13/11
Supercedes Date: 04/11/11

Document Group: 24-2136-0

Product Use:
Intended Use: Automotive
Specific Use: Catalyst for Automotive Body Fillers

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
BENZOYL PEROXIDE	94-36-0	30 - 60
WATER	7732-18-5	10 - 30
BENZOIC ACID, C9-11-BRANCHED ALKYL ESTERS	131298-44-7	10 - 20
ZINC STEARATE	557-05-1	3 - 7
OXIRANE, POLYMER WITH METHYLOXIRANE, MONOBUTYL ETHER	9038-95-3	1 - 5
CALCIUM SULFATE	7778-18-9	1 - 5
IRON OXIDE (FE2O3)	1309-37-1	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Viscous
Odor, Color, Grade: Red paste with slight ester odor
General Physical Form: Solid

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. May cause severe eye irritation. May cause allergic skin reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

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

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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

Prolonged or repeated exposure may cause:
Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

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

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Prolonged or repeated exposure may cause:
Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.
Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.
Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	111 °C [*Test Method:* Estimated]
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*

5.2 EXTINGUISHING MEDIA
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).
Water from a safe distance - preferably with a fog nozzle. In case of small fires, other means such as carbon dioxide, foam or dry chemical extinguishers may be effective.

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. Fire hazard increases when material becomes dry. Part of the oxygen for combustion is supplied by the peroxide itself.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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.

6.2. Environmental precautions
Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods
Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid eye contact with dust or airborne particles.

7.2 STORAGE
Store away from heat. Store out of direct sunlight. Keep container tightly closed. Do not heat under confinement to avoid risk of

explosion Storage at elevated temperatures will shorten shelf life.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
Indirect Vented Goggles
.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Polymer laminate
. Use an additional glove (e.g. supported PVC or Nitrile) over the PE/EVAL glove, and change the over-glove frequently.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters
. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
ZINC STEARATE	OSHA	TWA, respirable fraction	5 mg/m3	
ZINC STEARATE	OSHA	TWA, as total dust	15 mg/m3	
BENZOYL PEROXIDE	ACGIH	TWA	5 mg/m3	
BENZOYL PEROXIDE	OSHA	TWA	5 mg/m3	
CALCIUM SULFATE	ACGIH	TWA, inhalable fraction	10 mg/m3	
CALCIUM SULFATE	OSHA	TWA, respirable fraction	5 mg/m3	
CALCIUM SULFATE	OSHA	TWA, as total dust	15 mg/m3	
IRON OXIDE (FE2O3)	ACGIH	TWA, respirable fraction	5 mg/m3	
IRON OXIDE (FE2O3)	OSHA	TWA, as fume	10 mg/m3	

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Viscous
Odor, Color, Grade:	Red paste with slight ester odor
General Physical Form:	Solid
Autoignition temperature	*No Data Available*
Flash Point	111 °C [*Test Method:* Estimated]
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Boiling Point	*No Data Available*
Density	1.2 g/cm3
Vapor Density	*Not Applicable*
Vapor Pressure	*Not Applicable*
Specific Gravity	1.2 [@ 25 °C] [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*No Data Available*
Solubility in Water	Negligible
Evaporation rate	*No Data Available*
Hazardous Air Pollutants	0 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	0 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]
Volatile Organic Compounds	0 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Volatile Organic Compounds	0 % weight [*Test Method:* calculated per CARB title 2]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	20 % [*Details:* Water is the volatile component]
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Viscosity	*No Data Available*

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable. Stable unless exposed to heat, flames and drying conditions.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat

10.2 Materials to avoid
Accelerators

Additional Information: Storage at elevated temperatures will shorten shelf life.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Toxic Vapor, Gas, Particulate	Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
LB-K100-0415-4, LB-K100-0415-5, LB-K100-0415-6, LB-K100-0415-7, LB-K100-0540-4, 41-0003-6615-7, 60-4550-4812-8, 60-4550-4999-3, 60-4550-5166-8, 60-4550-5582-6, 60-4550-5584-2, 70-0080-0037-7, 70-0080-0039-3, 70-0080-0147-4, 70-0080-0164-9, 70-0080-0172-2, 70-0080-0173-0, 70-0080-0174-8, 70-0080-0704-2, 70-0080-0705-9, 70-0080-0706-7

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - No Pressure Hazard - No Reactivity Hazard - Yes Immediate Hazard - Yes Delayed Hazard - Yes

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
ZINC STEARATE (ZINC COMPOUNDS)	557-05-1	3 - 7
BENZOYL PEROXIDE	94-36-0	30 - 60

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

WHMIS: Hazardous

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

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Reactivity:** 1 **Special Hazards:** Oxidizer

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: 2 **Flammability:** 1 **Reactivity:** 1 **Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS®) 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® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:
Section 4: First aid for eye contact - decontamination - was modified.
Section 4: First aid for eye contact - medical assistance - was modified.
Section 3: Potential effects from eye contact was modified.
Section 3: Potential effects from skin contact information was modified.
Section 3: Immediate eye hazard(s) was added.

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3M USA MSDSs are available at www.3M.com

SAFETY DATA SHEET

Molub-Alloy 777-1 ES

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

Product identifier Molub-Alloy 777-1 ES

SDS # 464073

Historic SDS #: 73361

Code 464073-US17

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

Product use Grease for industrial applications
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Manufacturer BP Lubricants USA Inc.
1500 Valley Road
Wayne, NJ 07470
Telephone: +1-888-CASTROL
Product Information: +1-877-641-1600

Supplier PAN AMERICAN ENERGY LLC, SUCURSAL ARGENTINA AV. LEANDRO N. ALEM 1180
PISO 11 – C1001AAT
CIUDAD AUTÓNOMA DE BUENOS AIRES.

Consultas Técnicas 0800-888-8088

EMERGENCY HEALTH INFORMATION: TELÉFONO PARA EMERGENCIAS (24 HORAS) CIQUIME: 0800-222-2933
+1-800-424-9300 (CHEMTREC USA)
+1-703-527-3887 (CHEMTREC outside the US)

EMERGENCY TELEPHONE NUMBER

SECTION 2: Hazards identification

Classification of the substance or mixture SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms

Signal word Warning

Hazard statements H317 - May cause an allergic skin reaction.

Precautionary statements

Prevention P280 - Wear protective gloves.
P261 - Avoid breathing vapor.
P272 - Contaminated work clothing should not be allowed out of the workplace.

Response P302 + P352 + P362 + P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P333 + P313 - If skin irritation or rash occurs: Get medical attention.

Storage Not applicable.

SECTION 2: Hazards identification

Disposal P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification Defatting to the skin.
Note: High Pressure Applications
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.
See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

SECTION 3: Composition/information on ingredients

Substance/mixture Mixture

Highly refined mineral oil and additives. Thickening agent.

Other means of identification Not available.

Ingredient name	CAS number	%
Base oil - highly refined	Varies - See Key to abbreviations	≥75 - ≤90
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	72676-55-2	<2.5
Molybdenum disulfide	1317-33-5	≤3
(Z)-N-9-octadecenylpropane-1,3-diamine	7173-62-8	<0.1

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 In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. In the event of any complaints or symptoms, avoid further exposure. Get medical attention.

Inhalation If inhaled, remove to fresh air. 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. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if adverse health effects persist or are severe.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. 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.

Most important symptoms/effects, acute and delayed

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

Indication of immediate medical attention and special treatment needed, if necessary

SECTION 4: First aid measures

Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects. 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.

Note: High Pressure Applications
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discolored and extremely painful with extensive subcutaneous necrosis.
Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

Specific treatments

No specific treatment.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media

Do not use water jet.

Specific hazards arising from the chemical

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

Combustion products may include the following:
metal oxide/oxides
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)
sulfur oxides (SO, SO_2 etc.)
nitrogen oxides (NO, NO_2 etc.)

Special protective actions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Contact 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. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. 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

SECTION 6: Accidental release measures

Small spill

Stop leak if without risk. Move containers from spill area. 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. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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. Contaminated absorbent material may pose the same hazard as the spilled product. If emergency personnel are unavailable, contain spilled material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor.

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. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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. Wash thoroughly after handling. 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. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. 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
Base oil - highly refined	**Ministry of Labor, Employment and Social Security. Argentina (Resolution 295,11/2003) (Argentina).** TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2003 Form: mist STEL: 10 mg/m³ 15 minutes. Issued/ Revised: 11/2003 Form: mist
Molybdenum disulfide	**Ministry of Labor, Employment and Social Security. Argentina (Resolution 295,11/2003) (Argentina).** TWA: 3 mg/m³, (as Mo) 8 hours. Issued/ Revised: 2/2001 Form: respirable fraction

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.
Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.
Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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. 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 glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Body protection

Use of protective clothing is good industrial practice.
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.
Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

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

In case of insufficient ventilation, wear suitable respiratory equipment.
For protection against metal working fluids, respiratory protection that is classified as “resistant to oil” (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m3), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m3).
Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.
The correct choice of respiratory protection depends upon the chemicals being

SECTION 8: Exposure controls/personal protection

handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

SECTION 9: Physical and chemical properties

Appearance

Physical state	Grease
Color	Gray. [Dark]
Odor	Mild.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Open cup: 260°C (500°F) [Cleveland.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Density	<1000 kg/m³ (<1 g/cm³) at 25°C
Solubility	insoluble in water.
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 available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization 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

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
(Z)-N-9-octadecenylpropane-1,3-diamine	Category 1	Not determined	Not determined

Information on the likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Skin contact Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

Inhalation Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

Skin contact Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Inhalation No specific data.

Ingestion No specific data.

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

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

Route
Not available.

SECTION 11: Toxicological information

SECTION 12: Ecological information

Toxicity

Environmental effects No known significant effects or critical hazards.

Persistence and degradability

Expected to be biodegradable.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) Not available.

Mobility Non-volatile. Grease. insoluble in water.

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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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

	ADR/RID	ADN	IMDG	IATA/ICAO
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

SECTION 14: Transport information

Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL and the IBC Code Not available.

SECTION 15: Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

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.

Other regulations

Australia inventory (AICS)	All components are listed or exempted.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (ENCS)	All components are listed or exempted.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.
United States inventory (TSCA 8b)	All components are active or exempted.
REACH Status	The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

SECTION 16: Other information

History

Date of issue/Date of revision	11/14/2019.
Date of previous issue	08/28/2019.
Prepared by	Product Stewardship
Key to abbreviations	ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road 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

SECTION 16: Other information

IMDG = International Maritime Dangerous Goods
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations
VOC = Volatile Organic Compound
Varies = may contain one or more of the following 101316-69-2, 101316-70-5, 101316-71-6, 101316-72-7, 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64741-97-5, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-64-9, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1, 74869-22-0, 90669-74-2

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

SAFETY DATA SHEET

Section 1. Identification

Product name Tribol GR 4020/220-2 PD

SDS # 468726

Code 468726-US26

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

Product use Grease for industrial applications.
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Supplier BP Lubricants USA Inc.
1500 Valley Road
Wayne, NJ 07470
Telephone: +1-888-CASTROL

EMERGENCY HEALTH INFORMATION: +1-800-447-8735

EMERGENCY SPILL INFORMATION: +1-800-424-9300 (CHEMTREC USA)
+1-703-527-3887 (CHEMTREC outside the US)

Section 2. Hazards identification

OSHA/HCS status This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

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

Highly refined mineral oil and additives. Thickening agent.

Ingredient name	CAS number	%
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	≥25 - ≤50
Residual oils (petroleum), solvent refined	64742-01-4	≥25 - ≤50
Distillates (petroleum), solvent-refined heavy paraffinic	64741-88-4	≤10
Molybdenum, bis(dibutylcarbamodithioato)di-μ-oxodioxodi-, sulfurized	68412-26-0	≤3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

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
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact
Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation
If inhaled, remove to fresh air. 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. Get medical attention if symptoms occur.

Ingestion
Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders
No action shall be taken involving any personal risk or without suitable training.

Most important symptoms/effects, acute and delayed

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

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician
Treatment should in general be symptomatic and directed to relieving any effects.
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.

Note: High Pressure Applications
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discolored and extremely painful with extensive subcutaneous necrosis.
Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

Specific treatments
No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media
Do not use water jet.

Specific hazards arising from the chemical
No specific fire or explosion hazard.

Hazardous combustion products
Combustion products may include the following:
metal oxide/oxides
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)
sulfur oxides (SO, SO_2 etc.)
nitrogen oxides (NO, NO_2 etc.)

Special protective actions for fire-fighters
No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters — Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

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. Floors may be slippery; use care to avoid falling.

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 — Move containers from spill area. Vacuum or sweep up material and place 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. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. If emergency personnel are unavailable, contain spilled material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor.

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. Wash thoroughly after handling. 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. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. 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

Distillates (petroleum), hydrotreated heavy naphthenic	**ACGIH TLV (United States).** TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction **OSHA PEL (United States).** TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993
Residual oils (petroleum), solvent refined	**ACGIH TLV (United States).** TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction **OSHA PEL (United States).**

Section 8. Exposure controls/personal protection

	TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993
Distillates (petroleum), solvent-refined heavy paraffinic	**ACGIH TLV (United States).** TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction **OSHA PEL (United States).** TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993
Molybdenum, bis(dibutylcarbamodithioato)di-µ-oxodioxodi-, sulfurized	**ACGIH TLV (United States).** TWA: 10 mg/m³, (as Mo) 8 hours. Issued/Revised: 2/2001 Form: Inhalable fraction TWA: 3 mg/m³, (as Mo) 8 hours. Issued/Revised: 2/2001 Form: Respirable fraction **OSHA PEL (United States).** TWA: 15 mg/m³, (as Mo) 8 hours. Issued/Revised: 6/1993 Form: Total dust

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.
Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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 glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Body protection

Use of protective clothing is good industrial practice.
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.
Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Section 8. Exposure controls/personal protection

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

In case of insufficient ventilation, wear suitable respiratory equipment.
For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m3), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m3).
Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.
The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

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 Grease

Color Amber. [Light]

Odor Not available.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Boiling point, initial boiling point, and boiling range Not available.

Flash point Open cup: 225°C (437°F) [Cleveland Estimated. Based on Lubricants - Base Oils]

Evaporation rate Not available.

Flammability Not applicable. Based on - Physical state

Lower and upper explosion limit/flammability limit Not applicable.

Vapor pressure Not available.

Relative vapor density Not applicable.

Density <1000 kg/m³ (<1 g/cm³) at 25°C

Solubility insoluble in water.

Partition coefficient: n-octanol/water Not applicable.

Auto-ignition temperature Not applicable.

Decomposition temperature Not available.

Viscosity Kinematic: 220 mm^2/s (220 cSt) at 40°C

Particle characteristics

Median particle size Not available.

Section 10. Stability and reactivity

Reactivity No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

Chemical stability The product is stable.

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 10. Stability and reactivity

Conditions to avoid Avoid all possible sources of ignition (spark or flame).

Incompatible materials Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.

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

Information on the likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Skin 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.

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking

Inhalation No specific data.

Ingestion No specific data.

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

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

Not available.

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Persistence and degradability

Not expected to be rapidly degradable.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) Not available.

Mobility Non-volatile. Grease. insoluble in water.

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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user Not available.

Transport in bulk according to IMO instruments Not available.

Section 15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b)	All components are active or exempted.

Other regulations

Australia inventory (AIIC)	All components are listed or exempted.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (CSCL)	All components are listed or exempted.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.
REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

History

Date of issue/Date of revision	01/04/2022.
Date of previous issue	01/04/2022.
Prepared by	Product Stewardship
Key to abbreviations	ACGIH = American Conference of Industrial Hygienists ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number 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) OEL = Occupational Exposure Limit SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average UN = United Nations UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods. Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

Indicates information that has changed from previously issued version.

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Section 16. Other information

taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

Chemical Name: Free Penetrant and Release Agent

Manufacturer: Certified

Container size: 12oz.

Location: VLA

Disposal: Place empty container in trash.

MATERIAL SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: FREE

Manufacturer's Product Code: 5068

Other Names: Hydrocarbon based rust loosening aerosol.

Major Recommended Uses: As a rust loosening spray for rusty nuts and bolts and other metal pieces.

Supplier's Details: CERTIFIED LABORATORIES

Address: 114 SIDCO INDUSTRIAL ESTATE
AMBATTUR, CHENNAI – 600 098
Telephone Number: 44 – 2635 0176 / 7
Fax Number: 44 – 2635 0175
E-mail: nchindia@bsnl.in

Emergency Telephone Number: 44 – 2635 0176 / 7

Date of Issue: September 2007

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SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification: NOT classified as hazardous according to the criteria of NOHSC.

Dangerous Goods Class & Sub-risk: Class 2.1, no sub-risk.

Poisons Schedule: None allocated.

Risk Phrases: Flammable.
Repeated exposure may cause skin dryness or cracking.
Vapours may cause drowsiness and dizziness.

Safety Phrases: Keep out of reach of children
Keep away from sources of ignition - no smoking.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	CAS No	Proportion	Synonyms
'INGREDIENTS DETERMINED NOT TO BE HAZARDOUS'		100%	

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SECTION 4 – FIRST AID MEASURES

Skin: Wash affected areas with plenty of soap and water for several minutes. Seek medical attention if irritation develops.

Eye: Rinse eyes with water for 15-minutes. Seek medical attention if irritation develops.

Inhalation: Remove to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion: Give 3-4 glasses of water, but do NOT induce vomiting. If vomiting occurs, give fluids again. Seek medical attention if discomfort occurs.

First Aid Facilities: General eyewash.

Advice to Doctor: There is no specific antidote. Treat the patient symptomatically.

Additional Information: Gastric lavage is indicated. Do not induce vomiting. Chronic poisoning has produced secondary anaemia, leucocytosis and a cloudy swelling and fatty degradation of the viscera. Primary routes of entry are via inhalation and absorption.

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SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media: In the event of a fire, powder, foam, CO_2 and water spray are the recommended extinguishing agents.

Special Protective Equipment and Precautions for Fire Fighters: Fire fighters should wear self-contained breathing apparatus and full protective gear.

Fire/Explosive Hazards: Vapours are heavier than air and may travel to distant and/or low-lying sources of ignition and flashback. Product may produce a floating fire hazard as liquid floats on water.

Hazchem Code: 2Y

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SECTION 6 – ACCIDENTAL RELEASE MEASURES

Wear appropriate protective clothing.
Methods and Materials for Containment and Clean Up: Due to the nature of aerosol packaging, a large spill is unlikely. For a small spill, ventilate the area and absorb with an inert material. Dispose of waste in a closed, labelled container in accordance with local, state and Commonwealth laws. Typical disposal is to wrap the empty aerosol container in several layers of newspaper and dispose of in the garbage. Do not puncture or incinerate the can.

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SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling: Observe precautions stated on product label, and follow industry safety regulations. Eating and smoking should be prohibited where the preparation is used. Use with caution around heat, sparks, pilot lights, static electricity and open flame.

Conditions for Safe Storage: Store indoors in the in original container. Store in a dry, well-ventilated area. Store below 49°C.

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SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards: Not established for this mixture. The exposure limits for individual components follow:

Ethyl acetate:	TWA - 200ppm; 720mg/m³ ;STEL - 400ppm; 1440mg/m³
Propane/butane propellant:	TLV TWA – 800ppm; 1900mg/m³

Engineering Controls: General exhaust is usually adequate, although local ventilation is recommended to control exposure from operations that can generate mists or vapours. Minimise use in confined spaces.

Personal Protective Equipment:
Eye/Face Protection: Wear safety glasses or solvent resistant mask if the method of use presents the likelihood of eye contact. AS1336 and AS/NZS1337 should be consulted for information on eye protection.

Skin Protection: Neoprene or nitrile rubber gloves should be worn if repeated or prolonged skin contact is likely.

Respiratory Protection: None required under normal conditions of use. If misting is likely to occur, or if used in confined or poorly ventilated areas where exposure will be above the TLV, an approved

organic vapour respirator meeting the requirements outlined in AS/NZS 1715 and AS/NZS 1716 should be used.

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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to amber liquid with a vinegar odour.
pH:	Not applicable
Vapour Pressure:	Not available
Boiling Point:	72ºC
Melting Point:	Not applicable
Solubility in Water (g/L):	Insoluble
Specific Gravity:	0.87 (At 25 ºC ; water = 1)
Flashpoint:	27°C
Flashpoint Method:	TAG Closed Cup
Flammability Limits:	LEL: 2.2; UEL: 11.0
% Volatiles by Volume:	50.0%
Evaporation Rate:	1.0 (BU A/C = 1)

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SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.

Hazardous Polymerisation: Will not occur.

Conditions/Materials to Avoid: Avoid heat, hot surfaces, sparks, and open flames.
Keep away from strong oxidising agents such as chlorine bleach, concentrated hydrogen peroxide, dichromates, permanganates, and potassium hypochlorite; acids, bases, silica gel, potassium t-butoxide, oleum, nitrates, lithium tetrahydroaluminate, lithium aluminium hydride, chromium trioxide, chlorosulfonic acid, 2-chloromethylfuran, amines, and alumina.

Hazardous Decomposition Products: Oxides of carbon – carbon monoxide under extreme heat; oxides of nitrogen, sodium, and sulphur; aldehydes.

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SECTION 11 – TOXICOLOGICAL INFORMATION

Health Effects:
Acute - Swallowed: May cause irritation with possible nausea, cramps, vomiting and diarrhoea.

Acute - Eye: May cause irritation seen as tearing, redness, and a burning sensation. Blurred vision may result.

Acute - Skin: May cause irritation seen as itching and redness.

Acute - Inhaled: May cause respiratory irritation seen as coughing and sneezing. Inhalation of large amounts may cause dizziness, headache and other central nervous system effects.

Chronic: Due to the use pattern of this product, the likelihood of any chronic effects occurring is remote. Medical conditions aggravated by exposure are pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis; pre-existing blood, cardiovascular, liver, and kidney diseases. May cause corneal clouding, dermatitis or even a narcotic effect and also congestion in the liver and kidneys.

Target Organs: Central nervous system, lungs, kidneys and liver.

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SECTION 12 – ECOLOGICAL INFORMATION

No specific toxicology data on this product is available. When used as indicated, no adverse environmental effects are foreseen. Avoid contaminating waterways.

Persistence/Degradability: Not readily biodegradable; slowly biodegradable in aerobic conditions.

Mobility in Soil: Not soluble in water.

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SECTION 13 – DISPOSAL CONSIDERATIONS

Do not incinerate or puncture aerosol cans. If aerosol can develops a leak, allow to fully discharge before disposal. Prevent disposal in sewers and waterways. Normally suitable for disposal at approved land waste site, but review Commonwealth, State and local government requirements prior to disposal.

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SECTION 14 – TRANSPORT INFORMATION

UN Number:	UN1950
UN Proper Shipping Name:	Aerosol
Transport Hazard Class:	ADG Class 2.1, no sub-risk.
Packaging Group:	Not applicable.
Hazchem Code:	2Y

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SECTION 15 - REGULATORY INFORMATION

Poisons Schedule: None allocated ;

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SECTION 16 – OTHER INFORMATION

1st update of 16-heading MSDS – added DG pictogram to Section 15.

Since the user's working conditions are not known by the supplier, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The product must not be used for any purposes other than those specified in Section 1 without first obtaining written handling instructions. CERTIFIED assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such non-recommended use, storage or disposal of the product.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties.

Safety Data Sheet

24 Hour Emergency Phone Numbers
Medical/Poison Control:
In U.S.: Call 1-800-222-1222

Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053
1-352-323-3500

NOTE: The National ResponseCenter emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this SDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this SDS are further described in Section 16.

1. Identification

Product Name: Original Contact Cement Gel

Product UPC Number: 070798253124, 070798253162

Manufacturer: DAP Products Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non - emergency matters)

SDS Coordinator: MSDS@dap.com

Emergency Telephone:
Transportation: 1-800-535 -5053
1-352-323-3500
Poison Control: 1-800-222-1222

Revision Date: 1/31/2020

Supercedes Date: 6/19/2015

Product Use/Class: Adhesive

SDS No: 00030536001

Preparer: Regulatory and Environmental Affairs

2. Hazards Identification

GHS Classification
Acute Tox. 4 Inhalation, Carc. 1B, Eye Irrit. 2, Flam. Liq. 1, Muta. 1B, Skin Irrit. 2, STOT RE 2, STOT SE 3 NE, STOT SE 3 RTI

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
4% of the mixture consists of ingredients of unknown acute toxicity

GHS HAZARD STATEMENTS

Flammable Liquid, category 1	H224	Extremely flammable liquid and vapour.

Skin Irritation, category 2	H315	Causes skin irritation.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
Germ Cell Mutagenicity, category 1B	H340	May cause genetic defects .
Carcinogenicity, category 1B	H350	May cause cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
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.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment (see … on this label).
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.
P370+P378	In case of fire: Use… to extinguish.
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.
P501	Dispose of contents/container to …

GHS SDS PRECAUTIONARY STATEMENTS

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.

3. Composition/Information on Ingredients

Chemical Name	CAS-No.	Wt. %	GHS Symbols	GHS Statements
Toluene	108-88-3	30-60	GHS02-GHS07-GHS08	H225-304-315-332-335-336-373
Distillates (petroleum), light distillate hydrotreating process, low-boiling	68410-97-9	10-30	GHS06-GHS07-GHS08	H304-312-315-331-336-340-350
Methyl ethyl ketone (MEK)	78-93-3	7-13	GHS02-GHS07	H225-319-332-336
Petroleum hydrocarbon resin	64742-16-1	1-5	No Information	No Information
Hydrogenated castor oil	8001-78-3	0.5-1.5	GHS06	H312-330
Magnesium oxide	1309-48-4	0.5-1.5	No Information	No Information

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. NOTE: Only trained personnel should administer artificial respiration or give oxygen.

FIRST AID - SKIN CONTACT: Wash skin with soap and water for 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing. DO NOT try to peel the solidified material from the skin or use solvents or thinners to dissolve it. The

use of vegetable oil or mineral oil is recommended for removal of this material from the skin. Flush exposed area with water while removing contaminated clothing. Get medical attention if irritation persists. To remove from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water.

FIRST AID - EYE CONTACT: If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

FIRST AID - INGESTION: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: Eliminate sources of ignition: heat, electrical equipment, sparks and flames. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash back. Vapors may form explosive mixtures with air. Containers may explode if exposed to extreme heat. Empty containers retain product residue (liquid and/or vapor). Vapor can ignite potentially causing an explosion.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces. Cool fire-exposed containers using water spray.

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Foam, Water Spray or Fog, Water

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: NOTE: Review fire hazards before proceeding with clean up. Immediately eliminate sources of ignition. Keep people away from and upwind of spill/leak. Prevent product from entering drains. Soak up with inert absorbent material and dispose of as hazardous waste. Read all product instructions before using. Personal protective equipment should include impervious gloves, protective eye wear, and suitable work clothes. Scrape up dried material and place into containers.

7. Handling and Storage

HANDLING: KEEP OUT OF REACH OF CHILDREN!DO NOT TAKE INTERNALLY. Remove all sources of ignition. Keep away from open flames, hot surfaces and sources of ignition. Provide adequate ventilation. Avoid heat, sparks and open flames. Wear appropriate personal protection. Avoid breathing vapor and contact with eyes, skin and clothing. Use in well ventilated area. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Empty containers retain product residue (liquid and/or vapor). Vapor can ignite potentially causing an explosion. Wash thoroughly after handling. Do not use in areas where static sparks may be generated. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Construction and repair activities can adversely affect indoor air quality. Consult with occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize impact.

STORAGE: Store away from sources of ignition and heat. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Store away from caustics and oxidizers. Keep containers tightly closed.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Toluene	20 ppm TWA	N.E.	200 ppm TWA	300 ppm Ceiling
Distillates (petroleum), light distillate hydrotreating process, low-boiling	N.E.	N.E.	N.E.	N.E.
Methyl ethyl ketone (MEK)	200 ppm TWA	300 ppm STEL	200 ppm TWA, 590 mg/m3 TWA	N.E.
Petroleum hydrocarbon resin	N.E.	N.E.	N.E.	N.E.
Hydrogenated castor oil	N.E.	N.E.	N.E.	N.E.
Magnesium oxide	10 mg/m3 TWA inhalable particulate matter	N.E.	15 mg/m3 TWA fume, total particulate	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

Personal Protection

RESPIRATORY PROTECTION: A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear and appropriate, properly fitted respirator (NIOSH approved) during and after application. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

SKIN PROTECTION: Solvent-resistant gloves.

EYE PROTECTION: Goggles or safety glasses with side shields.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.

HYGIENIC PRACTICES: Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Appearance:	Tan	**Physical State:**	Thick Liquid
Odor:	Strong Solvent	**Odor Threshold:**	Not Established
Density, g/cm3:	0.88 - 0.88	**pH:**	Not Applicable
Freeze Point, °C:	Not Established	**Viscosity (mPa.s):**	Not Established
Solubility in Water:	No Information	**Partition Coeff., n-octanol/water:**	Not Established
Decomposition Temperature, °C:	Not Established	**Explosive Limits, %:**	N.E. - N.E.
Boiling Range, °C:	N.E. - N.E.	**Auto-Ignition Temperature, °C**	Not Established
Minimum Flash Point, °C:	-6.1	**Vapor Pressure, mmHg:**	Not Established
Evaporation Rate:	Not Established	**Flash Method:**	Pensky-Martens Closed Cup
Vapor Density:	Not Established	**Flammability, NFPA:**	Flammable Liquid Class IA
Combustible Dust:	Does not support combustion		

(See "Other information" Section for abbreviation legend)
(If product is an aerosol, the flash point stated above is that of the propellant.)

10. Stability and Reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Keep away from open flames, hot surfaces and sources of ignition. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Avoid contact with skin, eyes and clothing. Do not smoke.

INCOMPATIBILITY: Open flames, hot surfaces and sources of ignition. Keep away from strong oxidizing agents, heat and open flames. Exothermic reaction with strong acids. Strong oxidizers, alkali metals and alkaline earth metals may cause fires or explosions.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e., COx, NOx.

11. Toxicological Information

EFFECT OF OVEREXPOSURE - INHALATION: Inhalation of vapors may cause irritation of the nose, throat, lungs and respiratory tract. Inhalation of vapors in high concentration may cause shortness of breath (lung edema). Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged, repeated or high exposures may cause central nervous system depression leading to headaches, nausea, drowsiness, dizziness, and possibly narcosis. In extreme cases, may cause loss

of consciousness.

EFFECT OF OVEREXPOSURE - SKIN CONTACT: Harmful if absorbed through the skin. May cause skin irritation. Prolonged and repeated skin contact may cause dermatitis, drying and defatting due to the solvent properties.

EFFECT OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation. Signs and symptoms may include: pain, tears, swelling, redness and blurred vision.

EFFECT OF OVEREXPOSURE - INGESTION: Harmful or fatal if swallowed. May cause gastrointestinal disturbances with dizziness and central nervous system depression. If ingested, may cause depressed respiration. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis, which can be fatal.

CARCINOGENICITY: No Information

EFFECT OF OVEREXPOSURE - CHRONIC HAZARDS: Repeated or prolonged exposure may cause skin, respiratory, kidney and liver damage. May cause kidney and liver damage as well as developmental and reproductive toxicity. Prolonged or repeated inhalation of solvent vapors may cause irregular heartbeat. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities. There have been cases of aplastic anemia from toluene in industrial exposures (ACGIH, 1992). Increased coagulation time and reduced clotting factors have also been found, which are indicators of damage to the bone marrow (Clayton & Clayton, 1994). Symptoms include: loss of memory, loss of intellectual ability and loss of coordination.

PRIMARY ROUTE(S) OF ENTRY: Skin Contact, Skin Absorption, Inhalation

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
108-88-3	Toluene	2600 mg/kg Rat	12000 mg/kg Rabbit	12.5 mg/L Rat
68410-97-9	Distillates (petroleum), light distillate hydrotreating process, low-boiling	5170 mg/kg Rat	1900 mg/kg Rabbit	>4.96 mg/L Rat
78-93-3	Methyl ethyl ketone (MEK)	2483 mg/kg Rat	5000 mg/kg Rabbit	34.5 mg/l Rat
64742-16-1	Petroleum hydrocarbon resin	N.I.	N.I.	N.I.
8001-78-3	Hydrogenated castor oil	>10000 mg/kg Rat	2000 mg/kg Rat	> 1.86 mg/L Rat
1309-48-4	Magnesium oxide	>3870 mg/kg Rat	N.I.	N.I.

N.I. = No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Ecological injuries are not known or expected under normal use.

13. Disposal Information

DISPOSAL INFORMATION: Residues and spilled material are hazardous waste due to ignitability. Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste. Liquids cannot be disposed of in a landfill. Do not flush into surface water or sanitary sewer system. Do not empty into drains. Do not re-use empty containers. The container for this product can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture, or weld on or near this container.

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: NOTE: Review fire hazards before proceeding with clean up. Immediately eliminate sources of ignition. Keep people away from and upwind of spill/leak. Prevent product from entering drains. Soak up with inert absorbent material and dispose of as hazardous waste. Read all product instructions before using. Personal protective equipment should include impervious gloves, protective eye wear, and suitable work clothes. Scrape up dried material and place into containers.

14. Transport Information

DOT UN/NA Number:	UN1133
DOT Proper Shipping Name:	Adhesives, containing a flammable liquid
DOT Technical Name:	N.A.
DOT Hazard Class:	3 Flammable liquid
Hazard SubClass:	N.A.
Packing Group:	No Information

15. Regulatory 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:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.
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

Revision Date: 1/31/2020 **Supersedes Date:** 6/19/2015

Reason for revision:

Revision Description Changed
Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
01 - Product Information
02 - Hazards Identification
05 - Flammability Information
08 - Exposure Controls/Personal Protection
09 - Physical & Chemical Information
11 - Toxicological Information
13 - Disposal Information
14 - Transportation Information
15 - Regulatory Information
16 - Other Information
Substance Chemical Name Changed
Substance Regulatory CAS Number Changed
Substance Hazardous Flag Changed
Substance Hazard Threshold % Changed
Revision Statement(s) Changed

Datasheet produced by: Regulatory Department

HMIS Ratings:

Health:	Flammability:	Reactivity:	Personal Protection:
3*	4	1	X

VOC Less Water Less Exempt Solvent, g/L: 702.8
VOC Material, g/L: 702
VOC as Defined by California Consumer Product Regulation, Wt/Wt%: 65.92
VOC Actual, Wt/Wt%: 79.5

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.

H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS02

GHS06

GHS07

GHS08

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

SAFETY DATA SHEET

DOW CORNING(R) 3140 RTV COATING

Version	Revision Date:	SDS Number:	Date of last issue: 04/09/2016
6.0	07/14/2016	1265102-00008	Date of first issue: 02/10/2015

SECTION 1. IDENTIFICATION

Product name : DOW CORNING(R) 3140 RTV COATING

Product code : 000000000001015788

Manufacturer or supplier's details

Company name of supplier : Dow Corning Corporation

Address : South Saginaw Road
Midland Michigan 48686

Telephone : (989) 496-6000

Emergency telephone : 24 Hour Emergency Telephone : (989) 496-5900
CHEMTREC : (800) 424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Adhesive, binding agents
Electrical industry and electronics

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H361f Suspected of damaging fertility.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone elastomer

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Hexamethyldisilazane reaction with Silica	68909-20-6	>= 10 - < 20
Methyltrimethoxysilane	1185-55-3	>= 1 - < 5
Octamethylcyclotetrasiloxane	556-67-2	>= 0.1 - < 1
Methanol	67-56-1	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : Suspected of damaging fertility.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Silicon oxides
Formaldehyde
Nitrogen oxides (NOx)

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 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 : Discharge into the environment must be avoided.
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.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
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.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Avoid inhalation of vapor or mist.
Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice.
Keep away from water.
Protect from moisture.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parame-ters / Permissible concentration	Basis
Hexamethyldisilazane reaction with Silica	68909-20-6	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
Methyltrimethoxysilane	1185-55-3	TWA	7.5 ppm	DCC OEL
Octamethylcyclotetrasiloxane	556-67-2	TWA	10 ppm	DCC OEL
		TWA	10 ppm	US WEEL
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m³	NIOSH REL
		ST	250 ppm 325 mg/m³	NIOSH REL
		TWA	200 ppm	OSHA Z-1

			260 mg/m³	

Occupational exposure limits of decomposition products

Ingredients	CAS-No.	Value type (Form of exposure)	Control parame-ters / Permissible concentration	Basis
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m³	NIOSH REL
		ST	250 ppm 325 mg/m³	NIOSH REL
		TWA	200 ppm 260 mg/m³	OSHA Z-1

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Engineering measures : Processing may form hazardous compounds (see section 10).
Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
Material : Chemical-resistant gloves

Remarks : For prolonged or repeated contact use protective gloves. Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the

resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.
For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Dow Corning customer service group.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	white, translucent
Odor	:	slight
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	> 65 °C
Flash point	:	> 101.1 °C Method: closed cup
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	:	1.05
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	300 Poise
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available

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. Can react with strong oxidizing agents. When heated to temperatures above 180 °C (356 °F) in the presence of air, trace quantities of formaldehyde may be released. Adequate ventilation is required. See OSHA formaldehyde standard, 29 CFR 1910.1048 Hazardous decomposition products will be formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	:	Exposure to moisture.
Incompatible materials	:	Oxidizing agents Water

Hazardous decomposition products

Contact with water or humid air	:	Methanol

Thermal decomposition : Formaldehyde

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 200 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Hexamethyldisilazane reaction with Silica:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on data from similar materials

Methyltrimethoxysilane:

Acute oral toxicity	:	LD50 (Rat): 12.3 ml/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Information taken from reference works and the literature.
Acute inhalation toxicity	:	LC50 (Rat): > 42.1 mg/l Exposure time: 6 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on test data
Acute dermal toxicity	:	LD50 (Rabbit): > 9,500 mg/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on test data

Octamethylcyclotetrasiloxane:

Acute oral toxicity	:	LD50 (Rat): > 4,800 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on test data
Acute inhalation toxicity	:	LC50 (Rat): 2975 ppm Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on test data
Acute dermal toxicity	:	LD50 (Rabbit): > 2.5 ml/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on test data

Methanol:

Acute oral toxicity	:	Acute toxicity estimate (Humans): 300 mg/kg Method: Expert judgment
Acute inhalation toxicity	:	Acute toxicity estimate: 3 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Expert judgment Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
Acute dermal toxicity	:	Acute toxicity estimate (Humans): 300 mg/kg Method: Expert judgment

Skin corrosion/irritation

Not classified based on available information.

Ingredients:

Hexamethyldisilazane reaction with Silica:

Assessment: Repeated exposure may cause skin dryness or cracking.

Methyltrimethoxysilane:

Species: Rabbit
Result: No skin irritation
Remarks: Based on test data

Octamethylcyclotetrasiloxane:

Species: Rabbit
Result: No skin irritation
Remarks: Based on test data

Methanol:

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Hexamethyldisilazane reaction with Silica:

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

Methyltrimethoxysilane:

Species: Rabbit
Result: No eye irritation
Remarks: Based on test data

Octamethylcyclotetrasiloxane:

Species: Rabbit
Result: No eye irritation
Remarks: Based on test data

Methanol:

Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Test Type: Buehler Test
Species: Guinea pig
Remarks: Based on data from similar materials

Ingredients:

Methyltrimethoxysilane:

Assessment: Probability or evidence of low to moderate skin sensitization rate in humans

Test Type: Buehler Test
Species: Guinea pig
Remarks: Based on test data

Octamethylcyclotetrasiloxane:

Assessment: Does not cause skin sensitization.

Test Type: Maximization Test
Species: Guinea pig
Remarks: Based on test data

Methanol:

Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Hexamethyldisilazane reaction with Silica:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on data from similar materials

Methyltrimethoxysilane:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on test data
	:	Test Type: Mutagenicity (in vitro mammalian cytogenetic test) Result: positive Remarks: Based on test data
	:	Test Type: Chromosome aberration test in vitro Result: positive Remarks: Based on test data
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Ingestion Result: negative Remarks: Based on test data
Germ cell mutagenicity - Assessment	:	Animal testing did not show any mutagenic effects.

Octamethylcyclotetrasiloxane:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on test data
	:	Test Type: Mutagenicity (in vitro mammalian cytogenetic test)

Result: negative
Remarks: Based on test data

: Test Type: Chromosome aberration test in vitro
Result: negative
Remarks: Based on test data

: Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative
Remarks: Based on test data

: Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative
Remarks: Based on test data

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on test data

Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on test data

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Methanol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

: Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Methanol:

Species: Mouse

Application Route: inhalation (vapor)
Exposure time: 18 Months
Result: negative

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Suspected of damaging fertility.

Ingredients:

Methyltrimethoxysilane:

Effects on fertility	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat, male and female Application Route: Ingestion Symptoms: No effects on fertility. Remarks: Based on test data
Effects on fetal development	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat, male and female Application Route: Ingestion Symptoms: No effects on fetal development. Remarks: Based on test data
Reproductive toxicity - Assessment	:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Octamethylcyclotetrasiloxane:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat, male and female Application Route: inhalation (vapor) Symptoms: Effects on fertility. Remarks: Based on test data
Effects on fetal development	:	Test Type: Prenatal development toxicity study (teratogenicity) Species: Rabbit Application Route: inhalation (vapor) Symptoms: No effects on fetal development. Remarks: Based on test data
Reproductive toxicity - Assessment	:	Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

Methanol:

Effects on fertility	:	Test Type: Fertility/early embryonic development Species: Mouse Application Route: Ingestion Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Mouse Application Route: Ingestion Result: positive Remarks: The effects were seen only at maternally toxic doses.

STOT-single exposure

Not classified based on available information.

Ingredients:

Methanol:

Target Organs: Eyes, Central nervous system
Assessment: Causes damage to organs.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Methyltrimethoxysilane:

Routes of exposure: inhalation (vapor)
Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Routes of exposure: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Octamethylcyclotetrasiloxane:

Routes of exposure: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Routes of exposure: inhalation (vapor)
Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Routes of exposure: Skin contact
Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

Repeated dose toxicity

Ingredients:

Methyltrimethoxysilane:

Species: Rat
Application Route: inhalation (vapor)
Remarks: Based on test data

Species: Rat
Application Route: Ingestion
Remarks: Based on test data

Octamethylcyclotetrasiloxane:

Species: Rat
Application Route: Ingestion
Remarks: Based on test data

Species: Rat
Application Route: inhalation (vapor)
Remarks: Based on test data

Species: Rabbit
Application Route: Skin contact
Remarks: Based on test data

Methanol:

Species: Rat
NOAEL: 1.06 mg/l
Application Route: inhalation (vapor)
Exposure time: 90 Days

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Ingredients:

Octamethylcyclotetrasiloxane:

Remarks: Results from a 2 year repeated vapor 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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Methyltrimethoxysilane:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia sp.): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 3.6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility. EC10 (Pseudokirchneriella subcapitata (green algae)): > 3.6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.
Toxicity to bacteria	:	EC50: > 100 mg/l Method: OECD Test Guideline 209

Octamethylcyclotetrasiloxane:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.022 mg/l Exposure time: 96 h Remarks: No toxicity at the limit of solubility.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia sp.): > 0.015 mg/l Exposure time: 48 h Remarks: No toxicity at the limit of solubility.
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): >= 0.0044 mg/l Remarks: No toxicity at the limit of solubility.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 0.0079 mg/l Exposure time: 21 d Remarks: No toxicity at the limit of solubility.

Ecotoxicology Assessment

Chronic aquatic toxicity	:	May cause long lasting harmful effects to aquatic life.

Methanol:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Orange-red killifish)): 15,800 mg/l Exposure time: 200 h
Toxicity to bacteria	:	IC50: > 1,000 mg/l Exposure time: 3 h

Persistence and degradability

Ingredients:

Methyltrimethoxysilane:

Stability in water	:	Degradation half life: 2.2 h pH: 7

Octamethylcyclotetrasiloxane:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 3.7 % Exposure time: 28 d Method: OECD Test Guideline 310
Stability in water	:	Degradation half life: 69.3 - 144 h (24.6 °C) pH: 7 Method: OECD Test Guideline 111

Methanol:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 95 % Exposure time: 20 d

Bioaccumulative potential

Ingredients:

Methyltrimethoxysilane:

Partition coefficient: n-octanol/water	:	log Pow: -2.36

Octamethylcyclotetrasiloxane:

Partition coefficient: n-octanol/water	:	log Pow: 6.48 (25.1 °C)

Methanol:

Bioaccumulation	:	Species: Leuciscus idus (Golden orfe) Bioconcentration factor (BCF): < 10

Partition coefficient: n-octanol/water	:	log Pow: -0.77

Mobility in soil

No data available

Other adverse effects

Ingredients:

Octamethylcyclotetrasiloxane:

Results of PBT and vPvB assessment	:	Remarks: Octamethylcyclotetrasiloxane (D4) meets the current REACh Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA)	:	This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.
Waste from residues	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Methanol	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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.

US State Regulations

Pennsylvania Right To Know

Dimethyl siloxane, hydroxy-terminated	70131-67-8
Hexamethyldisilazane reaction with Silica	68909-20-6
Methanol	67-56-1

California Prop. 65 WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Methanol	67-56-1

The ingredients of this product are reported in the following inventories:

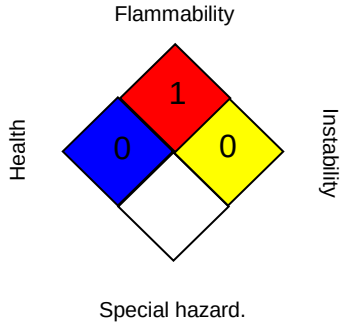
NZIoC	All ingredients listed or exempt.
TSCA	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
AICS	All ingredients listed or exempt.
IECSC	All ingredients listed or exempt.
ENCS/ISHL	All components are listed on ENCS/ISHL or exempted from inventory listing.
KECI	All ingredients listed, exempt or notified.
PICCS	All ingredients listed or exempt.
DSL	All chemical substances in this product comply with the CEPA

	1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).
REACH	For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office.
TCSI	All ingredients listed or exempt.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	0*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
DCC OEL	:	Dow Corning Guide
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
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
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
DCC OEL / TWA	:	Time weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average
US WEEL / TWA	:	8-hr TWA

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

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	07/14/2016

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

DuPont™ Non-Stick Dry Film Lubricant with Teflon® Fluoropolymer Aerosol

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Not applicable.
CAS No.	Mixture
Trade Name	DuPont™ Non-Stick Dry Film Lubricant with Teflon© fluoropolymer - Aerosol
Product Code	None

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

Identified Use(s)	Lubricant
Uses Advised Against	None

Company Identification	Finish Line Technologies, Inc. 50 Wireless Blvd. Hauppauge, NY 11788
Telephone	(631) 666-7300
E-Mail (competent person)	SDSinfo@finishlineusa.com

Emergency telephone number

Emergency Phone No.	**Medical Emergency:** PROSAR 24 hr: 1-800-217-5157 / 1-651-523-0304 **Transportation Emergency:** CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) — Flam. Aerosol 1; 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.
Pressurized container: May burst if heated.
May be fatal if swallowed and enters airways.
Causes serious eye irritation.
Causes skin irritation.
May cause drowsiness or dizziness.

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.
Pressurized container: Do not pierce or burn, even after use.
Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.
Avoid breathing spray.
Wash hands and exposed skin thoroughly after handling:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Use only outdoors or in a well-ventilated area.

Keep out of reach of children.

Other hazards None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt.	CAS No.
Isopropanol	40 - 50	64-67-0
Heptane, branched, cylic and linear	20 - 30	426260-76-6
Propane	5 - 15	74-98-6
n-Butane	5 - 15	106-97-8

Additional Information - None

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation	Move person to fresh air. If breathing is labored, administer oxygen. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If irritation (redness, rash, blistering) develops, get medical attention. Take off contaminated clothing and wash it before reuse.
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.
Ingestion	Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	May be fatal if swallowed and enters airways.
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 — Extinguish with carbon dioxide, dry chemical, foam or water spray.

-Unsuitable Extinguishing Media	Do not use water jet.
Special hazards arising from the substance or mixture	Highly flammable vapor (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. Wear protective gloves/eye protection. Avoid breathing spray. Use product in a well-ventilated area only.
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. Do not spray on an open flame or other ignition source. Avoid contact with skin and eyes. Use product in a well-ventilated area only. Avoid breathing spray.

Conditions for safe storage, including any incompatibilities

-Storage temperature	Keep out of reach of children. Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F. Keep in a cool, well ventilated place. Keep container tightly closed.
-Incompatible materials	This product should be stored away from sources of strong heat or oxidising chemicals.
Specific end use(s)	Lubricant

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA) PEL (OSHA)	(8hr TWA) TLV (ACGIH)	STEL PEL (OSHA)	STEL TLV (ACGIH)	Note:
Heptane, branched, cylic and linear	426260-76-6	500 ppm*	1500 mg/m^3	-----	-----	*n-heptane
Isopropanol	67-63-0	400 ppm	200 ppm	-----	400 ppm	-----
n-Butane	106-97-8	-----	250 ppm	-----	-----	-----
Propane	74-98-6	1000 ppm	Aspyx.#	-----	-----	#

#Assure minimum oxygen content of work atmosphere.

Recommended monitoring method	NIOSH 1500 (hydrocarbons, B.P. 36 - 216 °C); NIOSH 1400 (Alcohols I)

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). Check with protective equipment manufacturer's data.
Respiratory protection 	In case of insufficient ventilation, wear suitable respiratory equipment. Check with protective equipment manufacturer's data.
Thermal hazards	Not normally required.
Environmental Exposure Controls	Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Aerosol spray
Color.	White (Translucent)
Odor	Petroleum spirit
Odor Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (C):	Not available
Flash Point (°C)	-104 (Propane)
Evaporation Rate	Not available
Flammability (solid, gas)	Highly flammable
Explosive Limit Ranges	2.1% - 9.5% v/v (Propane)
Vapour pressure (Pascal)	ca 95 x 10^4 (Propane)
Vapour Density (Air=1)	ca 1.56 @ 0°C (Propane)
Density (g/ml)	Not available
Solubility (Water)	Not available
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	450 (Propane)
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt)	<20 @ 40 °C
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
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, Other

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Toxicity - Substances in preparations / mixtures

Information on toxicological effects

Isopropanol (CAS# 67-63-0):

Acute toxicity	Oral: LD50 = 5.84 g/kg (rat) Inhalation: LC50 > 1000 ppm (rat) 6 hour(s) Dermal: LD50 = 16.4 ml/kg (rabbit) 24 hour(s) May cause drowsiness or dizziness.
Irritation/Corrosivity	Irritating to eyes.
Sensitization	It is not a skin sensitizer.
Repeated dose toxicity	NOAEL = 5,000 ppm (Inhalation) May cause drowsiness or dizziness.
Carcinogenicity	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.
Reproductive toxicity	Not available

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 (Vapor), 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.
Sensitization	It is not a skin sensitizer.
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

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Isopropanol (CAS# 67-63-0):

Short term	LC50 (96 hour): 10,000 mg/l (Fathead minnow (Pimephales promelas)) LC50 24hour(s): >10,000 mg/l *(Daphnia magna)*
Long Term	NOEC: 3.37 µmol/l (Daphnia magna) (Growth rate)
Persistence and degradability	Not available.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

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	Not available.
Bioaccumulative potential	Not available.
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 (U.S. DOT)	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	None.	None.	None.
Environmental hazards	No.	No.	No.
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:

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

TSCA 12(b) Export Notification: CAS 9002-84-0 Polytetrafluoroethylene

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	----	----	----

SARA 311/312 - Hazard Categories:

☒ Fire ☒ Sudden Release ☐ Reactivity ☒ Immediate (acute) ☐ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
Isopropanol	67-63-0	42

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
None	----	----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.
Date of preparation: March 26, 2015

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.

DuPont™ Silicone Lubricant with Teflon® fluoropolymer - Aerosol

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Not applicable.
CAS No.	Mixture
Trade Name	DuPont™ Silicone Lubricant with Teflon® fluoropolymer - Aerosol
Product Code	None

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

Identified Use(s)	Lubricant
Uses Advised Against	None

Company Identification	Finish Line Technologies, Inc. 50 Wireless Blvd. Hauppauge, NY 11788
Telephone	(631) 666-7300
E-Mail (competent person)	SDSinfo@finishlineusa.com

Emergency telephone number

Emergency Phone No.	**Medical Emergency:** PROSAR 24 hr: 1-800-217-5157 / 1-651-523-0304 **Transportation Emergency:** CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) — Flam. Aerosol 1; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1

Label elements

Hazard Symbol

DANGER

Hazard Statement(s)

Extremely flammable aerosol.
Pressurized container: May burst if heated.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.

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.

Pressurized container: Do not pierce or burn, even after use.

Protect from sunlight and do not expose to temperatures exceeding 50 ºC/122 ºF.

Avoid breathing spray.

Wash hands and exposed skin thoroughly after handling:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Use only outdoors or in a well-ventilated area.

Keep out of reach of children.

Other hazards None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt.	CAS No.
Heptane, branched, cylic and linear	15 - 25	426260-76-6
Distillates (petroleum), hydrotreated light	15 - 25	64742-47-8
Distillates (petroleum), blend of various solvent-refined and hydrotreated heavy paraffinic and residual oils	1 - 20	mixture
Propane	5 - 15	74-98-6
Butane	5 - 15	106-97-8

Additional Information - None

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation	Move person to fresh air. If breathing is labored, 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	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	May be fatal if swallowed and enters airways. Will cause skin irritation. Vapours may cause drowsiness and dizziness.
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	Extinguish with carbon dioxide, dry chemical, foam or water spray.
-Unsuitable Extinguishing Media	Do not use water jet.

Special hazards arising from the substance or mixture	Highly flammable vapor (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.
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.
-Incompatible materials	This product should be stored away from sources of strong heat or oxidising chemicals.
Specific end use(s)	Lubricant

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		STEL		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Heptane, branched, cylic and linear	426260-76-6	500 ppm*	1500 mg/m^3	-----	-----	*n-heptane
Oil mist (mineral)	-------	5 mg/m3	5 mg/m3$^{(I)}$	-----	-----	$^{(I)}$Inhalable
Propane	74-98-6	1000 ppm	Aspyx.$^{\#}$	-----	-----	#

$^{\#}$Assure minimum oxygen content of work atmosphere.

Recommended monitoring method	NIOSH 1500 (hydrocarbons, B.P. 36 - 216 ºC) ; NIOSH 5026 (Oil mist; mineral)

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	In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards	Not normally required.
Environmental Exposure Controls	None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid / Liquefied gas
Color.	Clear / Colourless
Odor	Petroleum spirit
Odor Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	94 - 98 (201 - 208 °F)
Flash Point (°C)	-104 (Propane)
Evaporation Rate	Not available
Flammability (solid, gas)	Extremely flammable
Explosive Limit Ranges	2.1% - 9.5% v/v (Propane)
Vapour pressure (Pascal)	ca. 95 x 10^4 (Propane)
Vapour Density (Air=1)	ca. 1.56 @ 0ºC (Propane)
Density (g/ml)	Not available
Solubility (Water)	Not available
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	Not available
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt)	<10 @ 40 °C
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Other information	VOC content = 59% by wt.

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, Other

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation**,** Skin Contact**,** Eye Contact

Acute toxicity	Oral: LD50 >5 g/kg-bw Dermal: LD50 >2 g/kg-bw Inhalation: LC50 = 65 - 103 mg/L (Vapor), 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. Causes eye irritation.
Sensitization	It is not a skin sensitizer.
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

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	Not available.
Bioaccumulative potential	Not available.
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 (U.S. DOT)	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	No.	No.	No.
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:

TSCA (Toxic Substance Control Act) - Inventory Status**:** All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	----	----	----

SARA 311/312 - Hazard Categories:

☒ Fire ☒ Sudden Release ☐ Reactivity ☒ Immediate (acute) ☐ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	----	----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
None	----	----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.
Date of preparation: March 17, 2015

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

Techspray E-LINE BLUE SHOWER Maintenance Cleaner

Section 1. Identification

GHS product identifier : Techspray E-LINE BLUE SHOWER Maintenance Cleaner

Product code : 1620-10S

Other means of identification : Degreasers

Product type : Aerosol.

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

Not applicable.

Supplier's details : Techspray
8125 Cobb Center Drive
Kennesaw, GA 30152
Tel:678-819-1408
Toll free: 800-858-4043
Fax: 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
24/

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
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
GASES UNDER PRESSURE Compressed gas
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 25%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable aerosol.
Causes serious eye irritation.
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. Wear eye or face protection. Wear protective clothing. 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. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : IF exposed or concerned: Get medical 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 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 attention.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Section 2. Hazards identification

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

Other means of identification : Degreasers

Ingredient name	%	CAS number
ethanol	≥10 - ≤25	64-17-5
Isopropyl alcohol	≥10 - ≤25	67-63-0
methanol	≤3	67-56-1

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. 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 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. 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. 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. 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. 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 : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause skin irritation.

Ingestion : Do not ingest. If swallowed then seek immediate medical assistance.

Over-exposure signs/symptoms

Section 4. First aid measures

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : Adverse symptoms may include the following:
central nervous system depression
nausea or vomiting
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. 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. 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. Runoff to sewer may create fire or explosion hazard. 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
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. 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). Water polluting material. May be harmful to the environment if released in large quantities.

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). 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. 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 breathing gas. Avoid breathing vapor or mist. Avoid release to the environment. 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. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethanol	**ACGIH TLV (United States, 3/2015).** STEL: 1000 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 1900 mg/m³ 10 hours. TWA: 1000 ppm 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1900 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1900 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.
Isopropyl alcohol	**ACGIH TLV (United States, 3/2015).** STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. **NIOSH REL (United States, 10/2013).** STEL: 1225 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m³ 10 hours. TWA: 400 ppm 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 980 mg/m³ 8 hours. TWA: 400 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** STEL: 1225 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m³ 8 hours. TWA: 400 ppm 8 hours.
methanol	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin.** STEL: 328 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 262 mg/m³ 8 hours. TWA: 200 ppm 8 hours. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** STEL: 325 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 260 mg/m³ 10 hours. TWA: 200 ppm 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 260 mg/m³ 8 hours. TWA: 200 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** **Absorbed through skin.** STEL: 325 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 260 mg/m³ 8 hours. TWA: 200 ppm 8 hours.

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.

Section 8. Exposure controls/personal protection

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.

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 : Clear. Colorless.

Odor : Characteristic.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : >1 ((TCE=1) = 1)

Flammability (solid, gas) : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

Lower and upper explosive (flammable) limits : Lower: 1.1%
Upper: 6.7%

Vapor pressure : 7.4 kPa (55.5 mm Hg) [room temperature]

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Section 9. Physical and chemical properties

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 30.26 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
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-

Section 11. Toxicological information

				milligrams	
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethanol	-	1	-
Isopropyl alcohol	-	3	-
methanol	None.	-	-

Reproductive toxicity

Not available.

Teratogenicity

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 : Causes serious eye irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause skin irritation.

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:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : Adverse symptoms may include the following:
central nervous system depression
nausea or vomiting
Ingestion Seek medical attention.

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 : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

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

Route	ATE value
Oral	39113.6 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
Isopropyl alcohol	Acute LC50 1400000 to 1950000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
methanol	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon -	48 hours

Section 12. Ecological information

	Acute LC50 3289 to 4395 mg/l Fresh water Acute LC50 290 mg/l Fresh water Chronic NOEC 9.96 mg/l Marine water	Adult Daphnia - Daphnia magna - Neonate Fish - Danio rerio - Egg Algae - Ulva pertusa	48 hours 96 hours 96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ethanol	-0.35	-	low
Isopropyl alcohol	0.05	-	low
methanol	-0.77	<10	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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I); Methyl alcohol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	-	-	-	UN1950	UN1950	ID8000
UN proper shipping name	Consumer commodity ORM-D	Consumer commodity ORM-D	Consumer commodity ORM-D	Aerosols, flammable	AEROSOLS IN LIMITED QUANTITIES OF CLASS 2 (heptane, 1, 1-difluoroethane)	Consumer commodity ORM-D ID8000 (ethanol)

Section 14. Transport information

Transport hazard class(es)	ORM-D	ORM-D	ORM-D	2 	2.1 	9 
Packing group	-	-	-	II	II	-
Environmental hazards	Yes.	No.	No.	Yes.	No.	No.
Additional information	This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2).	-	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Hazard identification number** UN1950 **Tunnel code** (D)	-	The environmentally hazardous substance mark may appear if required by other transportation regulations.

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 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :
TSCA 8(a) PAIR: heptane
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act (CAA) 112 regulated flammable substances: 1,1-difluoroethane

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

Section 15. Regulatory information

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Sudden release of pressure
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
ethanol Isopropyl alcohol methanol	≥10 - ≤25 ≥10 - ≤25 ≤3	Yes. Yes. Yes.	No. No. No.	No. No. No.	Yes. Yes. Yes.	Yes. No. No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Isopropyl alcohol methanol	67-63-0 67-56-1	≥10 - ≤25 ≤3
Supplier notification	Isopropyl alcohol methanol	67-63-0 67-56-1	≥10 - ≤25 ≤3

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 : The following components are listed: HEPTANE; N-HEPTANE; DIFLUOROETHANE; ETHYL ALCOHOL; DENATURED ALCOHOL; ISOPROPYL ALCOHOL; 2-PROPANOL; METHANOL; METHYL ALCOHOL

New York : The following components are listed: Methanol

New Jersey : The following components are listed: n-HEPTANE; HEPTANE; 1,1-DIFLUOROETHANE; ETHANE, 1,1-DIFLUORO-; ETHYL ALCOHOL; ALCOHOL; ISOPROPYL ALCOHOL; 2-PROPANOL; METHYL ALCOHOL; METHANOL

Pennsylvania : The following components are listed: HEPTANE; DENATURED ALCOHOL; ETHANOL; ISOPROPYL ALCOHOL MANUFACTURE (STRONG-ACID PROCESS); METHANOL

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
ethanol methanol	No. No.	No. Yes.	Yes. No.	No. 23000 µg/day (ingestion) 47000 µg/day (inhalation)

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Section 15. Regulatory information

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.

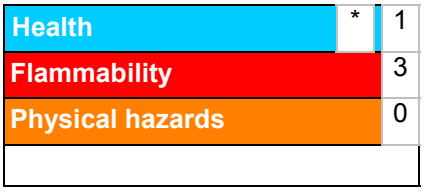
International lists

National inventory

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.
Japan	:	**Japan inventory (ENCS)**: All components are listed or exempted. **Japan inventory (ISHL)**: Not determined.
Malaysia	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Turkey	:	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 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.)

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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.

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 1A	Calculation method

History

Date of printing : 8/15/2019

Date of issue/Date of revision : 8/15/2019

Date of previous issue : 8/15/2019

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
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

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.

SAFETY DATA SHEET
Lubricating Oil
According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Lubricating Oil

Chemical name Process Oil

Product number 1003, 1003B, 1003RB, 1003CN

Internal identification 1000-202

CAS number 64742-54-7

Recommended use of the chemical and restrictions on use

Application Firearm Lubrication

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Manufacturer Bushnell Holdings Inc
9200 Cody
Overland Park, KS 66214
1-800-423-3537
dangerous.goods@vistaoutdoor.com

Emergency telephone number

Emergency telephone Emergency Telephone Number (Hazardous Material/Dangerous Goods Transportation Emergency Only) 1-800-424-9300 (Inside US Only) +01-703-527-3887 (Outside US) - (CHEMTREC, Day and Night)

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Label elements

Hazard statements NC Not Classified

Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

3. Composition/information on ingredients

Substances

Product name Lubricating Oil

Chemical name Process Oil

CAS number 64742-54-7

4. First-aid measures

Description of first aid measures

Lubricating Oil

General information	If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
Inhalation	No specific recommendations. If throat irritation or coughing persists, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if any discomfort continues.
Ingestion	No specific recommendations. If throat irritation or coughing persists, proceed as follows. Rinse mouth. Get medical attention if any discomfort continues.
Skin Contact	No specific recommendations. Rinse with water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	Use protective equipment appropriate for surrounding materials.

Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known. Spray/mists may cause respiratory tract irritation.
Ingestion	No specific symptoms known. May cause discomfort if swallowed.
Skin contact	No specific symptoms known. May cause discomfort.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
Specific treatments	No special treatment required.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
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	Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

Lubricating Oil

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions No specific recommendations. For personal protection, see Section 8.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

Methods and material for containment and cleaning up

Methods for cleaning up Reuse or recycle products wherever possible. Absorb spillage to prevent material damage. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of contents/container in accordance with national regulations.

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). No specific recommendations.

Storage class Unspecified storage.

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

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³
Short-term exposure limit (15-minute): ACGIH 10 mg/m³

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.

Exposure controls

Protective equipment

Appropriate engineering controls No specific ventilation requirements.

Eye/face protection No specific eye protection required during normal use. Large Spillages: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

Lubricating Oil

Hand protection	No specific hand protection recommended. Large Spillages: Wear protective gloves.
Other skin and body protection	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	No specific recommendations. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.
Environmental exposure controls	Not regarded as dangerous for the environment.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Clear liquid.
Color	Water-white.
Odor	Odorless.
pH	Not applicable.
Melting point	Not determined.
Initial boiling point and range	315°C/599°F
Flash point	192°C/378°F
Evaporation rate	No information available.
Flammability (solid, gas)	Class IIIB Liquid
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	< 0.01 mm Hg @ 25°C
Vapor density	> 1.0 g/cc
Relative density	0.866
Bulk density	7.228 lb/gal
Solubility(ies)	Insoluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	210°C/410°F
Decomposition Temperature	Not determined.
Volatility	3% wt (Max)

10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.

Lubricating Oil

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Toxicological effects	Not regarded as a health hazard under current legislation.

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Based on available data the classification criteria are not met.

Respiratory sensitization

Respiratory sensitization	Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

Lubricating Oil

General information	No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known. Spray/mists may cause respiratory tract irritation.
Ingestion	No specific symptoms known. May cause discomfort if swallowed.
Skin Contact	No specific symptoms known. May cause discomfort.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

12. Ecological Information

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
Toxicity	Based on available data the classification criteria are not met.

Persistence and degradability

Persistence and degradability	The degradability of the product is not known.

Bioaccumulative potential

Bio-Accumulative Potential	No data available on bioaccumulation.
Partition coefficient	Not determined.

Mobility in soil

Mobility	No data available.

Other adverse effects

Other adverse effects	None known.

13. Disposal considerations

Waste treatment methods

General information	The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way.
Disposal methods	Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.

14. Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

Not applicable.

UN proper shipping name

Not applicable.

Lubricating Oil

Transport hazard class(es)

No transport warning sign required.

Packing group

Not applicable.

Environmental hazards

Environmentally Hazardous Substance
No.

Special precautions for user

Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
None of the ingredients are listed or exempt.

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

Lubricating Oil

California Directors List of Hazardous Substances
None of the ingredients are listed or exempt.

Massachusetts "Right To Know" List
None of the ingredients are listed or exempt.

Rhode Island "Right To Know" List
None of the ingredients are listed or exempt.

Minnesota "Right To Know" List
None of the ingredients are listed or exempt.

New Jersey "Right To Know" List
None of the ingredients are listed or exempt.

Pennsylvania "Right To Know" List
None of the ingredients are listed or exempt.

Inventories

US - TSCA
None of the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms	Asp. Tox. = Aspiration hazard
Training advice	Only trained personnel should use this material.
Revision date	2/8/2019
Revision	7
Supersedes date	10/9/2017
SDS No.	4634

End of Safety Data Sheet

SLIPKOTE® Specialty Lubricants

manufactured by HUSK-ITT Corporation / SPECIALTY LUBRICANTS Corporation

Eastern Region Office:
8300 Corporate Park Drive, Macedonia, Ohio 44056
(330) 425-2567 • FAX (330) 425-9637
(800) 238-5823 • www.speclubes.com

Western Region Office:
1580 Industrial Avenue, Norco, California 92860
(951) 340-4000 • FAX (951) 340-4011
(800) 4-HUSKEY • www.huskey.com

Conforms to HazCom 2012/United States

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

PRODUCT IDENTIFIER(S)/ TRADEMARK(S) USED ON THE LABEL:	SLIPKOTE Air Tool Oil 150 Husky air tool oil – HDA10800AV Campbell Hausfeld (CH) air tool oil – ST127001AV, ST127012AV
OTHER MEANS OF IDENTIFICATION:	Product Code – 10640
CHEMICAL FAMILY:	Compounded Petroleum Oil
FORMULA:	Proprietary Information
MANUFACTURER:	SPECIALTY LUBRICANTS CORPORATION 8300 Corporate Park Drive Macedonia, OH 44056 USA (P): 1-800-238-5823 (F): 1-330-425-9637
EMERGENCY PHONE:	800-424-9300 (24HR)
CHEMTREC PHONE:	800-424-9300 (24HR)

SECTION 2: HAZARDS IDENTIFICATION

PHYSICAL HAZARDS:	Not classified.
HEALTH HAZARDS:	Not classified.
ENVIRONMENTAL HAZARDS:	Not classified.
OSHA DEFINED HAZARDS:	Not classified.
LABEL ELEMENTS:	
SIGNAL WORD:	Not applicable.
HAZARD STATEMENTS:	Not applicable.
PREVENTION:	Not applicable.
RESPONSE:	Not applicable.
STORAGE:	Not applicable.
DISPOSAL:	Not applicable.
HAZARDS NOT OTHERWISE CLASSIFIED (HNOC):	See Section 11
ADDITIONAL INFORMATION:	None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCES

CHEMICAL NAME	CAS NUMBER	%
Hydrotreated Heavy Paraffinic Distillates	64742-65-0	> 99
Zinc Dialkyldithiophosphate Additive	68649-42-3	< 1

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF NECESSARY FIRST AID MEASURES

EYE CONTACT: Flush eyes with large amounts of water for 15 minutes. If eye irritation develops or persists get medical help.

SKIN CONTACT: Remove contaminated clothing. Wash affected area with a waterless hand cleaner, and/or soap and water. If irritation persists, consult a physician.

INHALATION: Remove to fresh air. Get medical attention if symptoms persist.

ASPIRATION: If there is any suspicion of aspiration into the lungs obtain medical advice.

INGESTION: If the material is swallowed, get immediate medical attention—Do not induce vomiting.

NOTES TO PHYSICIAN: This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT: > 420 °F

FLASH POINT METHOD: COC

BURING RATE: Not determined.

LOWER FLAMMABLE LIMIT (LFL): Not determined.

UPPER FLAMMABLE LIMIT (UFL): Not determined.

FLAMMABILITY CLASSIFICATION: Not determined.

EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide, water fog. Water may be ineffective in fighting an oil fire unless used by experienced fire fighters.

GENERAL FIRE HAZARDS: Fire and explosion hazards are moderate when this product is exposed to heat or flame

HAZARDOUS COMBUSTION PROCEDURES: Carbon monoxide and carbon dioxide. Decomposition of this product may yield oxides of sulfur and nitrogen. Decomposition of this product may yield oxides of phosphorus.

FIRE-FIGHTING EQUIPMENT/INSTRUCTION: Do not point solid water stream directly into burning oil to avoid spreading. Wear full set of protective equipment including chemical goggles and gloves.

SECTION 6: ACCIDENTAL RELEASE MEASURES

CONTAINMENT PROCEDURES: Contain the discharge material. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

CLEAN-UP PROCEDURES: Absorb with inert absorbent such as dry clay, sand, or diatomaceous earth. Scoop up used absorbent into drums. Dispose of spent absorbent in an approved industrial waste landfill. Do not allow the spilled product to enter public drainage system or open water courses. Thoroughly wash the area after a spill or leak clean-up.

EVACUATION PROCEDURES: Isolate area. Keep unnecessary personnel away.

SECTION 6: ACCIDENTAL RELEASE MEASURES (CONTINUED)

SPECIAL INSTRUCTIONS: Wear appropriate protective equipment and clothing during clean-up. Surfaces may become slippery after spillage.

SPILL TO NAVIGABLE WATERS: If this material is spilled into navigable waters and creates a visible sheen, it is reportable to the Nation Response Center.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR HANDLING: Avoid getting this material into contact with your skin and eyes. Avoid the generation of oil mists. Wash hands after handling and before eating. Keep this product from heat, sparks, or flames.

RECOMMENDED STORAGE METHODS: Keep the container tightly closed and in a cool, well-ventilated place. When using this material, do not eat, drink or smoke. Do not store this material in open or unlabeled containers. Store away from strong oxidizers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

U.S. OSHA TABLE Z-1 LIMITS FOR AIR CONTAMINANTS (29 CFR 1910.1000)

COMPONENTS	TYPE	VALUE	FORM
Distillates (Petroleum) CAS 64742-65-0	PEL	5 mg/m^3	Mist.

U.S. ACGIH THRESHOLD LIMIT VALUES

MATERIAL	TYPE	VALUE	FORM
Base Oil	TWA	5 mg/m^3	Mist.

U.S. NIOSH (POCKET GUIDE TO CHEMICAL HAZARDS):

MATERIAL	TYPE	VALUE	FORM
Base Oil	STEL TWA	10 mg/m^3 5 mg/m^3	Mist. Mist.
COMPONENTS	**TYPE**	**VALUE**	**FORM**
Distillates (Petroleum) CAS 64742-65-0	STEL TWA	10 mg/m^3 5 mg/m^3	Mist. Mist.

BIOLOGICAL LIMIT VALUES: No biological limits noted for the ingredient(s).

ENGINEERING CONTROLS: Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

EYE/FACE PROTECTION: Wear chemical goggles or a full face shield.

SKIN PROTECTION Use impervious gloves for prolonged contact. Wear oil-impervious garments if contact is unavoidable. The use of neoprene gloves is recommended.

RESPIRATORY PROTECTION: If workplace exposure limit is exceeded use NIOSH-approved disposable dust/mist mask breathing apparatus for entry into confined space in the absence of proper environmental control.

GENERAL: Use good hygiene when handling petroleum product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Clear & Bright.

PHYSICAL STATE:	Liquid.
COLOR:	Light Amber to Amber.
FORM:	Liquid.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

ODOR:	Hydrocarbon-like.
ODOR THRESHOLD:	Not available.
pH:	Not applicable.
VISCOSITY AT 100 °F, SUS:	158
GRAVITY, °API:	32.6
SOLUBILITY IN WATER:	No
FLASH POINT °F:	420 °F
BOILING POINT °F:	NA
POUR POINT °F:	-15
VAPOR PRESSURE (MM HG 20C):	NA
EVAPORATION RATE:	Not available.
VAPOR DENSITY:	Not available.
RELATIVE DENSITY:	0.86
RELATIVE DENSITY TEMPERATURE:	60° F (15.56° C) ASTM D-4052/ISO 12185
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.
PARTITION COEFFICIENT (N-OCTANOL/WATER):	Not established.
AUTO-IGNITION TEMPERATURE:	> 600 °F (> 315.56 °C) ASTM E-659
DECOMPOSITON TEMPERATURE:	Not available.

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable.
HAZARDOUS POLYMERIZATION:	Hazard polymerization will not occur.
CHEMICAL INCOMPATIBILITIES:	This product may react with strong oxidizing agents.
CONDITIONS TO AVOID (STABILITY):	High temperatures and open flames.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon dioxide, Carbon monoxide, Oxides of sulfur and nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/ TARGET ORGAN INFORMATION:

GENERAL PRODUCT/ COMPONENT INFORMATION:	Product may be irritating to the skin, eyes, and respiratory system. Repeated skin contact with this product may cause dermatitis or an oil acne. Excessive inhalation of oil mist may cause accumulation of mineral oil in the lungs accompanied by pulmonary fibrosis.
COMPONENT LD50/LC50:	No data available for product.
EPIDEMIOLOGY:	No data available for product.

CARCINOGENICITY:

GENERAL PRODUCT/ COMPONENT INFORMATION:	No data available on the product as a whole. Prolonged and repeated skin contact with some mildly treated or untreated mineral oils have produced skin cancer in laboratory animals. Note

that USED oils tend to contain higher amounts of the cancer-causing aromatics, which have been linked to scrotal and lung cancer in humans.

SECTION 11: TOXICOLOGICAL INFORMATION (CONTINUED)

COMPONENT CARCINOGENICITY LISTING: None of this product's components are listed by ACGIH, IARC, NIOSH, NTP or OSHA.

TERATOGENICITY/ REPRODUCTIVE EFFECTS: No data available for the product as a whole.

NEUROTOXICITY: High vapor/aerosol concentrations (attainable only at elevated temperatures) may cause central nervous system effects such as dizziness, drowsiness or headaches.

MUTAGENICITY: No data available on this product as a whole.

OTHER INFORMATION: No information available.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: No information is available on ecotoxicity of this product. Keep product out of sewers and waterways.

ENVIRONMENTAL FATE: No information is available.

SECTION 13: DISPOSAL CONSIDERATIONS

U.S. EPA WASTE NUMBER & DESCRIPTIONS

GENERAL PRODUCT INFORMATION: Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. All waste must be handled in accordance with local, state, and federal governments.

COMPONENT WASTE NUMBERS: No EPA Waste Numbers are applicable for this product's components

DISPOSAL INSTRUCTIONS: Dispose of waste material according to Local, State, Federal, and Provincial Environment Regulation.

SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not regulated as hazardous material.

HAZARD CLASS: Not regulated.

DOT ID NO.: Not regulated.

PACKING GROUP: Not regulated.

DOT SHIPPING LABEL: None required.

ADDITIONAL SHIPPING INFORMATION: Not regulated.

INTERNATIONAL TRANSPORTATION REGULATIONS: Not regulated as dangerous goods.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: This product is not known to be 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.

CERCLA/SARA HAZARDOUS SUBSTANCES: Not applicable.

TSCA 12(b) EXPORT NOTIFICATION (40 CRF 707, SUBPT. D): Not regulated.

CERCLA HAZARDOUS SUBSTANCE LIST (40 CFR 302.4): Not listed.

U.S. OSHA SPECIFICALLY REGULATED SUBSTANCES (29 CFR 1910.1001-1050): Not listed.

SECTION 15: REGULATORY INFORMATION (CONTINUED)

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986

(SARA) HAZARD CATEGORIES:

Immediate Hazard –	Yes
	No
Delayed Hazard –	No
Fire Hazard –	No
Pressure Hazard –	No
Reactivity Hazard –	

SARA 302 EXTREMELY HAZARDOUS SUBSTANCE: Not listed.

SARA 311-312 HAZARDOUS CHEMICAL: Yes.

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.

U.S. STATE REGULATIONS: This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. 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.

U.S. MASSACHUSETTS RTK – SUBSTANCE LIST: Not regulated.

U.S. NEW JERSEY WORKER AND COMMUNITY RIGHT-TO-KNOW ACT: Not regulated.

U.S. PENNSYLVANIA RTK – HAZARDOUS SUBSTANCES: Not regulated.

U.S. RHODE ISLAND RTK: Not regulated.

U.S. 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) Non-Domestic Substances List (NDSL)	Yes No
China	Inventory of Existing Chemical Substances in China	Yes
Europe	European Inventory of Existing Commercial Chemical Substances European List of Notified Chemical Substances	Yes No
Japan	Inventory of Existing and New Chemical Substances	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances	Yes
United States and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

* **"Yes"** indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

"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

HAZARDOUS MATERIAL INFORMATION SYSTEM (U.S.A.)

Health: 1 **Flammability: 1** **Reactivity: 0**

NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)

Health: 0 **Flammability: 1** **Reactivity: 0**

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE-Personal Protection Equipment Index recommendation, *- Chronic Effect Indication). 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).

HISTORY

DATE ISSUE (MM/DD/YYYY): 03/04/2015

KEY TO ABBREVIATIONS:

ATE = Acute Toxicity Estimate
BCF = Bio-concentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Code
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 THE 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.

SAFETY DATA SHEET

1. Identification

Product identifier **Liquid Wrench Silicone Spray - WERCS**

Other means of identification

SDS number M914 - WERCS

Part No. M914, M914/6, M914/4

Tariff code 3403.19.1000

Recommended use Lubricant

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 2
	Gases under pressure	Compressed gas
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
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement Flammable aerosol. Contains gas under pressure; may explode if heated. 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.

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. Store in a well-ventilated place. 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)	Combustible. 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	79.43% of the mixture consists of component(s) of unknown acute oral toxicity. 83.17% of the mixture consists of component(s) of unknown acute dermal toxicity. 51.73% of the mixture consists of component(s) of unknown acute inhalation toxicity. 38.33% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 19.36% 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	%
Distillates (petroleum), Hydrotreated Light		64742-47-8	10 - < 20
Naphtha (petroleum), Hydrotreated Heavy		64742-48-9	10 - < 20
Solvent Naphtha (petroleum), Medium Aliph.		64742-88-7	10 - < 20
Stoddard Solvent		8052-41-3	10 - < 20
Dimethylpolysiloxane		63148-62-9	5 - < 10
Distillates (petroleum), Hydrotreated Heavy Naphthenic		64742-52-5	5 - < 10
1,2,4-Trimethylbenzene		95-63-6	1 - < 3
BENZENE, DIMETHYL		1330-20-7	1 - < 3
BENZENE, METHYL-		108-88-3	1 - < 3
BENZENE,1-METHYLETHYL-		98-82-8	1 - < 3
Carbon Dioxide		124-38-9	1 - < 3
Corrosion Inhibitor		Mixture	1 - < 3
ETHYLBENZENE		100-41-4	1 - < 3
HEXANE		110-54-3	1 - < 3
Nonane		111-84-2	1 - < 3
Trimethylbenzene		25551-13-7	1 - < 3
BENZENE		71-43-2	< 0.3
NAPHTHALENE		91-20-3	< 0.3
Other components below reportable levels			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. 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	Not likely, due to the form of the product. 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	Water fog. Alcohol resistant foam. Dry chemicals. 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 explode 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. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. 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. 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. Cool containers exposed to heat with water spray and remove container, if no risk is involved. 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	Flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame. Combustible.

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 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. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. 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. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. 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 discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. 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. Close valve after each use and when empty. Protect containers from physical damage; do not drag, roll, slide, or drop. When moving containers, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport containers. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

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. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. 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

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 Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
BENZENE (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
BENZENE, DIMETHYL (CAS 1330-20-7)	PEL	435 mg/m3	
		100 ppm	
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	PEL	245 mg/m3	
		50 ppm	
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3	
		5000 ppm	
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
		500 ppm	
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)	PEL	400 mg/m3	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
		100 ppm	
ETHYLBENZENE (CAS 100-41-4)	PEL	435 mg/m3	
		100 ppm	
HEXANE (CAS 110-54-3)	PEL	1800 mg/m3	
		500 ppm	
Naphtha (petroleum), Hydrotreated Heavy (CAS 64742-48-9)	PEL	400 mg/m3	
		100 ppm	
NAPHTHALENE (CAS 91-20-3)	PEL	50 mg/m3	
		10 ppm	
Stoddard Solvent (CAS 8052-41-3)	PEL	2900 mg/m3	
		500 ppm	

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
BENZENE (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
BENZENE, METHYL- (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm	
BENZENE (CAS 71-43-2)	STEL	2.5 ppm	
	TWA	0.5 ppm	
BENZENE, DIMETHYL (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	
BENZENE, METHYL- (CAS 108-88-3)	TWA	20 ppm	
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	TWA	50 ppm	
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm	
	TWA	5000 ppm	
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.
ETHYLBENZENE (CAS 100-41-4)	TWA	20 ppm	
HEXANE (CAS 110-54-3)	TWA	50 ppm	
NAPHTHALENE (CAS 91-20-3)	TWA	10 ppm	
Nonane (CAS 111-84-2)	TWA	200 ppm	
Solvent Naphtha (petroleum), Medium Aliph. (CAS 64742-88-7)	TWA	200 mg/m3	Non-aerosol.
Stoddard Solvent (CAS 8052-41-3)	TWA	100 ppm	
Trimethylbenzene (CAS 25551-13-7)	TWA	25 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	125 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
		25 ppm	
BENZENE (CAS 71-43-2)	STEL	1 ppm	
	TWA	0.1 ppm	
BENZENE, METHYL- (CAS 108-88-3)	STEL	560 mg/m3	
		150 ppm	
	TWA	375 mg/m3	
		100 ppm	
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	TWA	245 mg/m3	
		50 ppm	
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3	
		30000 ppm	
	TWA	9000 mg/m3	
		5000 ppm	
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.
ETHYLBENZENE (CAS 100-41-4)	STEL	545 mg/m3	
		125 ppm	
	TWA	435 mg/m3	
		100 ppm	
HEXANE (CAS 110-54-3)	TWA	180 mg/m3	
		50 ppm	
Naphtha (petroleum), Hydrotreated Heavy (CAS 64742-48-9)	TWA	400 mg/m3	
		100 ppm	
NAPHTHALENE (CAS 91-20-3)	STEL	75 mg/m3	
		15 ppm	
	TWA	50 mg/m3	
		10 ppm	
Nonane (CAS 111-84-2)	TWA	1050 mg/m3	
		200 ppm	
Solvent Naphtha (petroleum), Medium Aliph. (CAS 64742-88-7)	TWA	100 mg/m3	
Stoddard Solvent (CAS 8052-41-3)	Ceiling	1800 mg/m3	
	TWA	350 mg/m3	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
BENZENE (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
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	*
ETHYLBENZENE (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
HEXANE (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

BENZENE (CAS 71-43-2)	Can be absorbed through the skin.
BENZENE, METHYL- (CAS 108-88-3)	Can be absorbed through the skin.
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	Can be absorbed through the skin.
HEXANE (CAS 110-54-3)	Can be absorbed through the skin.
NAPHTHALENE (CAS 91-20-3)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

BENZENE, METHYL- (CAS 108-88-3)	Skin designation applies.
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	Skin designation applies.

US - Tennessee OELs: Skin designation

BENZENE,1-METHYLETHYL- (CAS 98-82-8)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

BENZENE (CAS 71-43-2)	Can be absorbed through the skin.
HEXANE (CAS 110-54-3)	Can be absorbed through the skin.
NAPHTHALENE (CAS 91-20-3)	Can be absorbed through the skin.
Solvent Naphtha (petroleum), Medium Aliph. (CAS 64742-88-7)	Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

BENZENE,1-METHYLETHYL- (CAS 98-82-8)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

BENZENE,1-METHYLETHYL- (CAS 98-82-8)	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. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece. Chemical respirator with organic vapor cartridge and full facepiece if threshold limits are exceeded.

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 Clear. Liquid

Physical state Liquid.

Form Aerosol. Compressed gas.

Color Pale yellow

Odor Petroleum

Odor threshold Not available.

pH Not available.

Melting point/freezing point -94 °F (-70 °C) estimated

Initial boiling point and boiling range 314.6 °F (157 °C) estimated

Flash point	117.0 °F (47.2 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0.7 % estimated
Flammability limit - upper (%)	6 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.26 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	229 °F (109.44 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	6.80 lbs/gal
Explosive properties	Not explosive.
Flame extension	25 in
Flammability (flash back)	No
Flammability class	Flammable IC estimated
Heat of combustion (NFPA 30B)	32.78 kJ/g estimated
Moisture	< 0.03 %
Oxidizing properties	Not oxidizing.
Percent volatile	5.23 % estimated
Refractive index	1.44
Specific gravity	0.82
VOC	58.5 % 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	Hazardous polymerization does not occur.
Conditions to avoid	Heat. Avoid temperatures exceeding the flash point. 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	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
1,2,4-Trimethylbenzene (CAS 95-63-6)		
Acute		
Dermal		
LD50	Rabbit	> 3160 mg/kg
BENZENE, DIMETHYL (CAS 1330-20-7)		
Acute		
Oral		
LD50	Rat	3523 - 8600 mg/kg
BENZENE,1-METHYLETHYL- (CAS 98-82-8)		
Acute		
Oral		
LD50	Rat	1400 mg/kg
Dimethylpolysiloxane (CAS 63148-62-9)		
Acute		
Dermal		
Liquid		
LD50	Rabbit	> 2000 mg/kg
ETHYLBENZENE (CAS 100-41-4)		
Acute		
Oral		
LD50	Rat	3500 mg/kg
NAPHTHALENE (CAS 91-20-3)		
Acute		
Dermal		
LD50	Rabbit	> 2 g/kg
Oral		
LD50	Rat	490 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 Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

BENZENE (CAS 71-43-2)	1 Carcinogenic to humans.
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.
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	2B Possibly carcinogenic to humans.
ETHYLBENZENE (CAS 100-41-4)	2B Possibly carcinogenic to humans.
NAPHTHALENE (CAS 91-20-3)	2B Possibly carcinogenic to humans.
Stoddard Solvent (CAS 8052-41-3)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

BENZENE (CAS 71-43-2)	Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

BENZENE (CAS 71-43-2)	Known To Be Human Carcinogen.
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	Reasonably Anticipated to be a Human Carcinogen.
NAPHTHALENE (CAS 91-20-3)	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.

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. Prolonged exposure may cause chronic effects.

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
1,2,4-Trimethylbenzene (CAS 95-63-6)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours
BENZENE (CAS 71-43-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	7.2 - 11.7 mg/l, 96 hours
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
BENZENE,1-METHYLETHYL- (CAS 98-82-8)			
Aquatic			
Crustacea	EC50	Brine shrimp (Artemia sp.)	3.55 - 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.7 mg/l, 96 hours
Dimethylpolysiloxane (CAS 63148-62-9)			
Aquatic			
Fish	LC50	Channel catfish (Ictalurus punctatus)	2.36 - 4.15 mg/l, 96 hours
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 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
HEXANE (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours

Components		Species	Test Results
Naphtha (petroleum), Hydrotreated Heavy (CAS 64742-48-9)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8.8 mg/l, 96 hours
			8.8 mg/l, 96 hours
NAPHTHALENE (CAS 91-20-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1.09 - 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha)	1.11 - 1.68 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
BENZENE	2.13
BENZENE, DIMETHYL	3.12 - 3.2
BENZENE, METHYL-	2.73
BENZENE,1-METHYLETHYL-	3.66
ETHYLBENZENE	3.15
HEXANE	3.9
NAPHTHALENE	3.3
Nonane	5.46
Stoddard Solvent	3.16 - 7.15

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

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, Limited Quantity
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Packing group Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions 8, 146, 335, IB3, T4, TP1, TP29
Packaging exceptions 155
Packaging non bulk 203
Packaging bulk 241

IATA

UN number UN1950
UN proper shipping name Aerosol, flammable

Transport hazard class(es)

Class	2.1
Subsidiary risk	-

Packing group Not available.

Environmental hazards Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1950

UN proper shipping name Aerosols

Transport hazard class(es)

Class	2.1
Subsidiary risk	-

Packing group Not available.

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 established.

DOT

IATA; IMDG

Marine pollutant

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.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Nonane (CAS 111-84-2)	1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

BENZENE (CAS 71-43-2)	Listed.
BENZENE, DIMETHYL (CAS 1330-20-7)	Listed.
BENZENE, METHYL- (CAS 108-88-3)	Listed.
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	Listed.
ETHYLBENZENE (CAS 100-41-4)	Listed.
HEXANE (CAS 110-54-3)	Listed.
NAPHTHALENE (CAS 91-20-3)	Listed.
Nonane (CAS 111-84-2)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

BENZENE (CAS 71-43-2)	Cancer Central nervous system Blood Aspiration Skin Eye respiratory tract irritation Flammability

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 No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1,2,4-Trimethylbenzene	95-63-6	1 - < 3
BENZENE	71-43-2	< 0.3
BENZENE, DIMETHYL	1330-20-7	1 - < 3
BENZENE, METHYL-	108-88-3	1 - < 3
BENZENE,1-METHYLETHYL-	98-82-8	1 - < 3
ETHYLBENZENE	100-41-4	1 - < 3
HEXANE	110-54-3	1 - < 3
NAPHTHALENE	91-20-3	< 0.3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

BENZENE (CAS 71-43-2)
BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
BENZENE,1-METHYLETHYL- (CAS 98-82-8)
ETHYLBENZENE (CAS 100-41-4)
HEXANE (CAS 110-54-3)
NAPHTHALENE (CAS 91-20-3)

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

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 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
BENZENE,1-METHYLETHYL- (CAS 98-82-8)	Listed: April 6, 2010
ETHYLBENZENE (CAS 100-41-4)	Listed: June 11, 2004
NAPHTHALENE (CAS 91-20-3)	Listed: April 19, 2002

US - California Proposition 65 - CRT: Listed date/Developmental toxin

BENZENE (CAS 71-43-2)	Listed: December 26, 1997
BENZENE, METHYL- (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

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2,4-Trimethylbenzene (CAS 95-63-6)
BENZENE (CAS 71-43-2)
BENZENE, DIMETHYL (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
BENZENE,1-METHYLETHYL- (CAS 98-82-8)
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)
ETHYLBENZENE (CAS 100-41-4)
HEXANE (CAS 110-54-3)
Naphtha (petroleum), Hydrotreated Heavy (CAS 64742-48-9)
NAPHTHALENE (CAS 91-20-3)
Solvent Naphtha (petroleum), Medium Aliph. (CAS 64742-88-7)
Stoddard Solvent (CAS 8052-41-3)

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 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 08-29-2017

Version # 01

HMIS® ratings Health: 3
Flammability: 4
Physical hazard: 3

NFPA ratings

Health: 2
Flammability: 3
Instability: 3

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 Number: 006.0

Issue date: 11/02/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **LOCTITE 609 RETAINING COMPOUND known as Loctite(R) 609 Retaining Compo**

IDH number: 135512

Product type: Anaerobic Adhesive

Item number: 60931

Restriction of Use: None identified

Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: (860) 571-5100
MEDICAL EMERGENCY Phone: Poison Control Center
1-877-671-4608 (toll free) or 1-303-592-1711
TRANSPORT EMERGENCY Phone: CHEMTREC
1-800-424-9300 (toll free) or 1-703-527-3887
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	2

PICTOGRAM(S)

Precautionary Statements

Prevention: Do not breathe vapors, mist, or spray. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.

Response: IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage: Not prescribed

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
2-Hydroxyethyl methacrylate	868-77-9	10 - 20
Poly (ethyl methacrylate)	9003-42-3	1 - 5
Cumene hydroperoxide	80-15-9	1 - 5
Saccharin	81-07-2	1 - 5
Methacrylic acid	79-41-4	0.1 - 1
Cumene	98-82-8	0.1 - 1

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers. In case of fire, keep containers cool with water spray.

Hazardous combustion products: Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling: Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8.

Storage: For safe storage, store at or below 38 °C (100.4 °F)
Keep in a cool, well ventilated area away from heat, sparks and open flame.
Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2-Hydroxyethyl methacrylate	None	None	None	3 ppm Ceiling
Poly (ethyl methacrylate)	None	None	None	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
Saccharin	None	None	None	None
Methacrylic acid	20 ppm TWA	None	None	None
Cumene	50 ppm TWA	50 ppm (245 mg/m3) PEL (SKIN)	None	None

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

Skin protection: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves. Glove recommendations are based upon permeation study results for similar products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Green
Odor: Mild
Odor threshold: Not available.
pH: Not applicable
Vapor pressure: < 5 mm hg (27 °C (80.6 °F))
Boiling point/range: > 149 °C (> 300.2 °F)
Melting point/ range: Not available.
Specific gravity: 1.1
Vapor density: Not available.
Flash point: > 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Flammability: Not applicable
Evaporation rate: Not available.
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available.
VOC content: 0.22 %; 2.46 g/l

Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.

Hazardous decomposition products: Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.

Incompatible materials: Strong oxidizing agents.

Reactivity: Not available.

Conditions to avoid: Elevated temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
2-Hydroxyethyl methacrylate	Oral LD50 (Mouse) = 3,275 mg/kg Oral LD50 (Rat) = 11.2 g/kg Oral LD50 (Rat) = 5,050 mg/kg	Irritant, Allergen
Poly (ethyl methacrylate)	None	Irritant
Cumene hydroperoxide	Inhalation LC50 (Mouse, 4 h) = 200 mg/l	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
Saccharin	Oral LD50 (Mouse) = 17 g/kg	No Target Organs
Methacrylic acid	Oral LD50 (Mouse) = 1,332 mg/kg Oral LD50 (Mouse) = 1,600 mg/kg Oral LD50 (Mouse) = 1,250 mg/kg Oral LD50 (Rabbit) = 1,200 mg/kg Oral LD50 (Rat) = 1,060 mg/kg Oral LD50 (Rat) = 2,224 mg/kg Dermal LD50 (Rabbit) = 500 mg/kg Inhalation LC50 (Rat, 4 h) = 7.1 mg/l	Corrosive, Irritant, Allergen
Cumene	Oral LD50 (Rat) = 2.91 g/kg Oral LD50 (Rat) = 1,400 mg/kg Inhalation LC50 (Rat, 4 h) = 8000 ppm	Central nervous system, Irritant, Lung

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2-Hydroxyethyl methacrylate	No	No	No
Poly (ethyl methacrylate)	No	No	No
Cumene hydroperoxide	No	No	No
Saccharin	No	No	No
Methacrylic acid	No	No	No
Cumene	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	RQ, Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division:	9
Identification number:	UN 3082
Packing group:	III
DOT Hazardous Substance(s):	alpha,alpha-Dimethylbenzylhydroperoxide

International Air Transportation (ICAO/IATA)

Proper shipping name:	RQ, Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division:	9
Identification number:	UN 3082
Packing group:	III

Water Transportation (IMO/IMDG)

Proper shipping name:	RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class or division:	9
Identification number:	UN 3082
Packing group:	III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis.
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA 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 (40 CFR 372). Cumene hydroperoxide (CAS# 80-15-9). Saccharin (CAS# 81-07-2).
CERCLA Reportable quantity:	Cumene hydroperoxide (CAS# 80-15-9) 10 lbs. (4.54 kg)
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status:	Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 2

Prepared by: Product Safety and Regulatory Affairs

Issue date: 11/02/2017

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Revision Number: 001.1

Issue date: 10/28/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **Loctite® Extend® Rust Neutralizer**
Product type: Rust converter
Restriction of Use: None identified
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

IDH number: 633877
Item number: 633877
Region: United States
Contact information:
Telephone: +1 (800) 624-7767
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER**:**
EXTREMELY FLAMMABLE AEROSOL.
HARMFUL IF SWALLOWED.
CAUSES SKIN IRRITATION.
CAUSES SERIOUS EYE DAMAGE.
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE AEROSOL.	1
ACUTE TOXICITY ORAL	4
SKIN IRRITATION	2
SERIOUS EYE DAMAGE	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)

Precautionary Statements

Prevention: 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. Avoid breathing mist or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye and face protection. Wear protective gloves.

Response: If SWALLOWED: Immediately call poison control or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and 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 remove. Continue rinsing. Immediately call a poison control center or physician. Rinse mouth. If skin irritation occurs: Get medical attention. Take off contaminated clothing.

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 and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Acetone	67-64-1	30 - 60
2-Butoxyethanol	111-76-2	10 - 30
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	27360-07-2	1 - 5
Formic acid	64-18-6	1 - 5
Propane/Isobutane	68476-86-8	10 - 30

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical advice.

Skin contact: Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. If symptoms develop and persist, get medical attention.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Carbon dioxide. Dry chemical. foam

Special firefighting procedures: Use water spray to keep fire exposed containers cool and disperse vapors. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Vapours may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back.

Hazardous combustion products: Oxides of carbon. Hydrocarbons Butyraldehyde. Butyric acid. Acrolein. Aldehydes. Ketones. Organic acids.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow material to contaminate ground water system. Do not let product enter drains.

Clean-up methods: Absorb the spilled material with an inert absorbent (nonflammable) material. Remove the absorbed material, and place in an appropriate chemical waste container for disposal. Eliminate ignition sources including sources of electrical, static or frictional sparks.

7. HANDLING AND STORAGE

Handling: Avoid breathing mists or aerosols of this product. Keep away from sources of ignition - no smoking. Avoid contact with eyes, skin and clothing. Keep out of the reach of children.

Storage: Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture, incinerate, or expose to temperatures above 48.9 °C (120 °F). Store in a cool, dry, well-ventilated area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Acetone	750 ppm STEL 500 ppm TWA	1,000 ppm (2,400 mg/m3) PEL	None	None
2-Butoxyethanol	20 ppm TWA	50 ppm (240 mg/m3) PEL (SKIN)	None	None
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	None	None	None	None
Formic acid	5 ppm TWA 10 ppm STEL	5 ppm (9 mg/m3) PEL	None	None
Propane/Isobutane	None	None	None	None

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Light Grey
Odor: Acidic, Vinegar-like
Odor threshold: Not available.
pH: 3.0
Vapor pressure: Not available.
Boiling point/range: Not available.
Melting point/ range: Not available.
Specific gravity: 0.845 - 0.855
Vapor density: Not available.
Flash point: < -6.70 °C (< 19.94 °F)
Flashback: This product exhibits flashback when tested for flame extension.
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not applicable
Evaporation rate: > 1.00
Solubility in water: Not available.
Partition coefficient (n-octanol/water): Not available.
VOC content: 33.1 %
Viscosity: Not available.

Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.

Hazardous decomposition products: Oxides of carbon. Acrolein. Aldehydes. Ketones. Organic acids.

Incompatible materials: Oxidizing agents. Concentrated nitric acid. Sulfuric acid. Alkalis. Acids. Potassium tert-butoxide.

Reactivity: Not available.

Conditions to avoid: Keep away from open flames, hot surfaces and sources of ignition. Avoid temperatures above 49°C (120°F).

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: May cause skin irritation. Repeated or prolonged contact can result in drying of skin. Symptoms may include redness, burning, drying, cracking and skin burns.

Eye contact: Direct spray or vapors will irritate and may harm eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Not a likely route of entry. May be harmful if swallowed. If swallowed, may be aspirated into the lungs resulting in inflammation and possible fluid accumulation.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Acetone	Oral LD50 (RABBIT) = 5,340 mg/kg Oral LD50 (RAT) = 5,800 mg/kg Oral LD50 (RAT) = 9,800 mg/kg Dermal LD50 (RABBIT) = 20,000 mg/kg Inhalation LC50 (RAT, 8 h) = 50.1 mg/l Inhalation LC50 (RAT, 4 h) = 76 mg/l	Blood, Central nervous system, Irritant, Reproductive
2-Butoxyethanol	Oral LD50 (RAT) = 560 mg/kg Oral LD50 (RABBIT) = 0.32 g/kg Oral LD50 (RAT) = 1.48 g/kg Dermal LD50 (RABBIT) = 400 mg/kg Inhalation LC50 (RAT, 4 h) = 486 ppm Inhalation LC50 (RAT, 4 h) = 450 ppm	Blood, Central nervous system, Irritant, Kidney, Liver
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	None	No Records
Formic acid	Oral LD50 (RAT) = 730 mg/kg Inhalation LC50 (RAT, 15 min) = 15 mg/l Inhalation LC50 (RAT, 4 h) = 7.4 mg/l	Central nervous system, Corrosive, Irritant, Kidney, Metabolic
Propane/Isobutane	None	No Records

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Acetone	No	No	No
2-Butoxyethanol	No	No	No
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	No	No	No
Formic acid	No	No	No
Propane/Isobutane	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Aerosols, flammable
Hazard class or division:	2.1
Identification number:	UN 1950
Packing group:	None
DOT Hazardous Substance(s):	Acetone

International Air Transportation (ICAO/IATA)

Proper shipping name:	Aerosols, flammable
Hazard class or division:	2.1
Identification number:	UN 1950
Packing group:	None

Water Transportation (IMO/IMDG)

Proper shipping name:	AEROSOLS
Hazard class or division:	2.1
Identification number:	UN 1950
Packing group:	None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health, Fire, Sudden Release
CERCLA/SARA 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 (40 CFR 372). 2-Butoxyethanol (CAS# 111-76-2). Formic acid (CAS# 64-18-6).
California Proposition 65:	No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 10/28/2014

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MATERIAL SAFETY DATA SHEET
LPS® HDX

Revision Date: June 17, 2011 **Supersedes:** July 12, 2010

Section 1 • Product and Company Identification

Product Name: LPS® HDX

Part Number(s): 01020 (aerosol), 01005, 01055, C01020 (aerosol), C01005, C01055

Chemical Name: Chlorinated Hydrocarbon (trichloroethylene)

Product Use: A degreaser designed to remove grease, oil, dirt and other residues from metal and other hard surfaces near ignition sources.

Manufacturer Information: LPS Laboratories, 4647 Hugh Howell Road, Tucker, GA, USA 30084
TEL: USA & Canada: 1 800 241-8334
Outside USA and Canada: +1 770 243-8800
FAX: USA & Canada: 1 800 543-1563
Outside USA and Canada: +1 770 243-8899

Emergency Telephone Number: Chemtrec: USA & Canada: 1 800 424-9300
Outside USA and Canada: +1 703 527-3887

Website: http://www.lpslabs.com

Section 2 • Hazards Identification

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Emergency Overview:

Aerosol: DANGER: Harmful or fatal if swallowed. Vapor harmful. Contents under pressure. Harmful if inhaled.

Bulk: DANGER: Harmful or fatal if swallowed. Vapor harmful. Harmful if inhaled.

Primary route(s) of entry: Skin and eye contact. Inhalation.

Potential Acute Health Effects:

Eyes: Liquid in eyes produces pain and irritation with mild temporary damage possible. Vapor can irritate eyes.

Skin: Prolonged or repeated contact of liquid can cause skin irritation, defatting of the skin and dermatitis. Absorption of liquid through intact skin is possible, causing systemic poisoning but this is an unlikely route of significant toxic exposure.

Inhalation: High concentrations of vapor, in excess of the occupational exposure limit, will lead to adverse effects on the central nervous system, causing nausea, headaches, dizziness and lightheadedness (concentrations in excess of 300 ppm). Higher concentrations, around 5000 ppm and above, will cause anesthetic effects, leading to unconsciousness and in extreme cases, coma and death. Very high exposures may cause an abnormal heart rhythm and prove suddenly fatal.

Ingestion: Product has a low order of acute oral toxicity, but ingestion of large quantities may cause nausea, vomiting, and gastrointestinal irritation. May cause injury if aspirated into lungs causing adverse health effects as described in the inhalation section above.

Potential Chronic Health Effects:

Carcinogenic Effects: **See Section 11**
NTP: Suspect carcinogen **IARC:** Group 2A **OSHA:** No **ACGIH:** No

Mutagenic Effects: Has been linked to mutagenic effects in humans.

Teratogenic Effects: Did not cause birth defects in laboratory animals. Has been toxic to the fetus in laboratory animals at levels toxic to the mother.

Target Organs: In animals, effects have been reported on the following organs: kidney, liver, central nervous system, peripheral nervous system.

Medical conditions aggravated by exposure:
Repeated exposure to high levels produces adverse effects on the liver and, to a lesser extent on the kidney. A condition known as "Degreaser's Flush", a pronounced redness of the skin, may occur on the face, hands, arms, feet and trunk of some individuals following repeated exposure to trichloroethylene and the consumption of alcohol. This effect can intensify over for 30 minute period but usually disappears completely after 1 hour. These symptoms may occur up to 6 weeks after the last exposure to trichloroethylene and can reoccur if exposure continues.

Interactions with other chemicals which enhance toxicity:
Consumption of alcoholic beverages may increase potential for development of toxic effects resulting from exposure to this product.

Signs and Symptoms
Stinging in eyes. Repeated or prolonged skin contact can cause redness, irritation, and scaling of the skin (dermatitis). Breathing of high vapor concentrations may cause headaches, stupor, irritation of throat and eyes, and kidney effects.

Section 3 • Composition / Information on Ingredients

Component	CASRN	Weight Percent
Trichloroethylene	79-01-6	90 - 100%
Carbon Dioxide (aerosol only)	124-38-9	1 - 10%

Section 4 • First Aid Measures

Eyes: Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. DO NOT use eye ointment. Seek medical attention immediately.

Skin: Remove contaminated shoes and clothing. Clean affected area thoroughly with mild soap and water. DO NOT use ointments. Seek medical attention if irritation persists.

Inhalation: Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, seek medical attention immediately.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. DO NOT leave victim unattended. Seek medical attention immediately.

Notes to Physician: Gastric lavage may be effective within four hours of ingestion. Aspiration hazard should be weighed against toxicity concerns. Chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators. Do not allow exposed person to exercise vigorously for 24 hours following potentially toxic exposure. 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.

Section 5 • Fire Fighting Measures

Products of Combustion: Carbon monoxide, carbon dioxide, chlorine, hydrogen chloride and traces of phosgene.

General Fire Hazards: High heat will cause product to boil, evolving vapor that could cause explosive rupture of closed containers.

Firefighting media: SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use CO2, water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosions.

Sensitivity to Impact: None **Sensitivity to Static Discharge:** None

Protection Clothing (Fire): Concentrated vapors can be ignited by high intensity ignition source. Firefighters should wear self-contained, positive pressure breathing apparatus and full protective clothing due to thermal decomposition products.

Special Remarks on Explosion Hazards:
Explosive mixtures of trichloroethylene and air can be formed but are difficult to ignite and require high intensity sources of heat such as welding arcs, sparks and flames or high temperatures and pressures; addition of small amounts of flammable substances to trichloroethylene (such as flammable liquids or gases) and/or an increase in the oxygen content of the local atmosphere may strongly enhance these effects. Welding or cutting should not be carried out on any vessel likely to contain solvent because of the risk of explosion. Thermal decomposition will evolve toxic and corrosive vapors of hydrogen chloride and phosgene. Containers may burst if overheated due to thermal expansion of the contents.

Section 6 • Accidental Release Measures

Containment Procedures:

Small Spill and Leak: Absorb with an inert material and dispose of properly.

Large Spill and Leak: Dike far ahead of a liquid spill to ensure complete collection. Pick up free liquid for disposal using absorbent pads, sand or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Do not allow to enter drains, sewers or waterways. Spillages or uncontrolled discharges into waterways must be alerted to the Environment Agency or other appropriate regulatory body.

Clean-Up Procedures: Recover free product and place in a suitable container for disposal.

Evacuation Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away.

Special Procedures: Ventilate area. Wear personal protective equipment during cleanup.

Section 7 • Handling and Storage

Handling: DO NOT breathe vapors. Use only in well ventilated areas. Avoid contact with skin and eyes. Avoid contact with naked flames and hot surfaces as toxic and corrosive decomposition products (hydrogen chloride) can be formed. The vapor is heavier than air and may reach dangerously high concentrations in pits, tanks and other confined spaces. In such cases, provide adequate ventilation or wear suitable respiratory protective equipment with positive air supply. When using, do not smoke. When welding metals degreased with trichloroethylene, special care is needed to ensure all solvent has evaporated from the components. Separate cleaning and welding areas. Ensure vapors from degreasing operations do not enter welding areas - welding arcs can cause trichloroethylene vapors to break down producing toxic vapors.

Storage: Keep container dry. Keep in a cool, well ventilated place. Keep away from direct sunlight. Keep away from heat and ignition sources.

Precautions to be taken in handling and storage:
Store aerosols as Level 1 Aerosol (NFPA 30B). Store all materials in a dry, well-ventilated area. Avoid breathing vapors.

Section 8 • Exposure Controls / Personal Protection

Exposure Guidelines:

Component	CASRN	OSHA	ACGIH	NIOSH	Supplier
Trichloroethylene	79-01-6	100 ppm PEL 200 ppm PEL	50 ppm TLV 100 ppm TLV	Not established	None reported
Carbon Dioxide (aerosol only)	124-38-9	5000 ppm PEL	5000 ppm TLV 30000 ppm STEL	5000 ppm TWA 30000 ppm STEL	None reported

Engineering Controls: Provide general and/or local exhaust ventilation to keep exposures below the exposure guidelines listed above. Lethal concentrations may exist in areas with poor ventilation.

Personal protective equipment

Eye protection: Safety glasses with side shields conforming to appropriate regulations. Eye wash fountain and emergency shower facilities are recommended.

Hand protection: Use chemically resistant protective gloves conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves.

Respiratory protection: If airborne concentrations are above the applicable exposure limits (listed above), use NIOSH approved respiratory protection (i.e. organic vapor cartridge).

General Hygiene Considerations: Wash thoroughly after handling. Have eye-wash facilities immediately available.

Section 9 • Physical and Chemical Properties

Appearance:	Clear liquid	**Color:**	Clear, light brown
Odor:	Sweet, spice	**Evaporation Rate:**	0.3 (Ethyl Ether = 1)
Solubility Description:	0.1% in water	**Flash Point:**	None
Boiling Point:	87°C (189°F)	**Flash Point Method:**	Tag-Closed Cup
Specific Gravity (H2O=1):	1.41 - 1.47 @ 20°C	**Decomposition Temperature:**	Not established
Vapor Density (air = 1):	4.5	**Auto ignition temperature:**	> 420ºC (788ºF)
Vapor Pressure:	58 mm Hg @ 20ºC	**Flammable limits (estimated):**	LOWER: 8.0% UPPER: 10.5%
Rule 1171 PPc:	Not established	**Partition Coefficient (octanol/water):**	2.4
V.O.C. Content:	Aerosol: 97.8%, 1414 g/L, 11.8 lb/gal per CARB/OTC/EPA Bulk: 100%, 1446 g/L, 12.1 lb/gal per CARB/OTC/EPA	**Odor Threshold:**	Not established
Melting Point:	Not established	**Viscosity:**	0.53 cPs @ 25ºC
pH:	Not applicable	**Volatiles:**	100%
Heat of combustion:	Aerosol: < 20 kJ/g Bulk: < 20 kJ/g		

Section 10 • Stability and Reactivity

Chemical Stability: Product is stable under recommended storage conditions.

Conditions to Avoid: Keep away from red hot surfaces, sparks or naked flames which may generate toxic fumes of phosgene and hydrogen chloride. Prolonged contact with aluminum or light alloys may cause a reaction resulting in the generation of hydrogen chloride gas and heat.

Incompatibility: Extremely reactive or incompatible with oxidizing agents. Reacts violently with sodium, potassium and barium metal. Reacts with finely divided aluminium, zinc and magnesium.

Hazardous Decomposition: Combustion will generate smoke, possibly thick and choking, resulting in zero visibility and combustion products include hydrogen chloride and traces of phosgen gas.

Hazardous Polymerization: Will not occur.

Section 11 • Toxicological Information

Acute and Chronic Toxicity

A: General Product Information
An acute toxicity study of this product has not been conducted. Information given in this section relates only to individual constituents contained in this preparation.

Trichloroethylene: 200 ppm causes mild eye irritation, 400 ppm causes slight eye irritation and minimal lightheadedness after 3 hours. 1,000 to 1,200 ppm after 6 minutes causes eye and nasal irritation, lightheadedness and dizziness. 2,000 ppm cannot generally be tolerated, is irritating to the eyes and respiratory tract and causes drowsiness, dizziness and nausea within 5 minutes. Ventricular arrythmias and very rapid respiration have been observed in individuals exposed to 15,000 ppm. High concentrations or prolonged overexposure can cause unconsciousness and death.

B: Component Analysis

Component	CASRN	LC-50	LD-50
Trichloroethylene	79-01-6	12500 ppm / rat / 4 hr*	4920 mg/kg / oral / rat* ~ 10000 mg/kg / dermal / rabbit*
Carbon Dioxide (aerosol only)	124-38-9	470000 ppm / rat / 30 minutes	Not appropriate

* Supplier Data

Carcinogenicity:
Trichloroethylene has been shown to cause cancer in animals. Mechanistic studies have shown that some of these observations are not relevant to humans. Some experts believe that repeated exposure to high concentrations of trichloroethylene may cause kidney cancer, although the evidence for a causal relationship between these events is not conclusive.

The International Agency for Reasearch on Cancer (IARC) has concluded that with respect to trichloroethylene, there is sufficient evidence of carcinogenicity to experimental animals and limited evidence of carcinogenicity to humans, resulting in a classification in Group 2A as a substance probably carcinogenic to humans. NTP has classified trichloroethylene as reasonably anticipated to be a human carcinogen. Although ACGIH currently does not consider trichloroethylene as a carcinogen, the ACGIH TLV Committee has placed this substance on the Notice of Intended Changes (NIC) list with a proposed change in the carcinogenicity classification from A5 to A2. Although this change is proposed, the A2 classification may or may not be adopted at some time in the future.

Mutagenicity:
Rodent - rat / 1000 ppm / 4 hr Brain and Coverings - Changes in surface EEG Peripheral Nerve and Sensation - Sensory syndrome diagnostic of central lesion Sense Organs and Special Senses (Eye) RTECS# KX4550000. Trichloroethylene has been linked to mutagenic effects in humans. Some studies measuring DNA damage (strand breaks, unscheduled DNA synthesis, in-vitro and in-vivo micronucleus and chromosomal aberrations) have been positive.

Neurotoxicity:
Rat / 1000 ppm / 4 hr Brain and Coverings - Changes in surface EEG Peripheral Nerve and Sensation - Sensory syndrome diagnostic of central lesion Sense Organs and Special Senses (Eye) RTECS# KX4550000.

Reproductive Toxicity:
Did not cause birth defects in laboratory animals; has been toxic to the fetus in laboratory animals at levels toxic to the mother.

Section 12 • Ecological Information

Mobility: Semi-volatile. Readily absorbed into soil.

Persistence / Degradability: Only slightly biodegradable

Bioaccumulative potential: No bioaccumulation potential

Other adverse effects: Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment. This product has potential for leaching.

Environmental Fate:
When released into the soil, trichloroethylene is expected to quickly evaporate, but large spills have potential to leach into groundwater. When released to water, trichloroethylene will quickly evaporate but large spills are expected to be slightly toxic to aquatic life. When released into the air, trichloroethylene is expected to have a half-life between 1 and 10 days.

Environmental Toxicity:
The LC50/96 hr values for trichloroethylene in fish are between 10 and 100 mg/L. Trichloroethylene has an experimentally determined bioconcentration factor (BCF) of less than 100 and is not expected to significantly bioaccumulate.

Ecotoxicity

Effects on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes	Trichloroethylene	79-01-6	96-hr LC50	Pimephales Promelas	41 - 67 mg/L*
Acute Toxicity on Daphnia	Trichloroethylene	79-01-6	48-hr LC50	Daphnia Magna	2.2 - 100 mg/L*
Bacterial Inhibition	Trichloroethylene	79-01-6	EC50	Unidentified microorganism	260 mg/L*
Growth inhibition of algae	Trichloroethylene	79-01-6	24-hr LC50	Algae	410 mg/L*
Bioaccumulation in fish	Trichloroethylene	79-01-6	BCF	Fish (unindentified species)	17 - 90*

* Supplier Data

Section 13 • Disposal Considerations

Waste Status: Aerosol cans, if depressurized and emptied to less than 1 inch (2.54 cm) of fluid contents, are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). If disposed of in its received form, the aerosol product carries the waste codes D040 and D003 (U.S.). If disposed of in its received form, the bulk product carries the waste code D040.

Disposal: Waste must be disposed of in accordance with any and all applicable environmental control rules and/or regulations.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information inaccurate, incomplete, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive than federal laws and regulations.

Section 14 • Transport Information

Aerosol

D.O.T. Ground	**Shipping Name:**	Consumer Commodity	**UN No.:**	NA
	Hazard Class:	ORM-D	**Technical Name:**	NA
	Subclass:	NA	**Hazard Label:**	ORM-D Already on box
	Packing Group:	NA		
Road/Rail - ADR/RID	**UN No.:**	1950	**ADR Class:**	2
	Packing Group:	NA	**Classification Code:**	5T
	Name and description:	AEROSOLS, toxic	**Hazard ID No.:**	NA
	Labeling:	2.2, 6.1	**Technical Name:**	NA
IMDG-IMO	**UN No.:**	1950	**Class:**	2
	Shipping Name:	Aerosols	**Subsidiary Risk:**	6.1
	Labeling:	2	**Packing Group:**	NA
	Packing Instructions:	P003, LP02	**EmS:**	F-D, S-U
	Marine pollutant:	No	**Technical Name:**	NA
IATA - ICAO:	**UN No.:**	1950	**Class:**	2.2
	Shipping Name:	Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III	**Subclass:**	6.1
	Packing Instructions:	203, Y203 (Ltd. Qty.)	**Packing Group:**	III
	Labeling:	Non-flammable Gas & Toxic	**Technical Name:**	NA

Bulk

D.O.T. Ground	**Shipping Name:**	Trichloroethylene	**UN No.:**	1710
	Hazard Class:	6.1	**Technical Name:**	NA
	Subclass:	NA	**Hazard Label:**	6.1
	Packing Group:	NA		
Road/Rail - ADR/RID	**UN No.:**	1710	**ADR Class:**	6.1
	Packing Group:	III	**Classification Code:**	T1
	Name and description:	Trichloroethylene	**Hazard ID No.:**	NA
	Labeling:	6.1	**Technical Name:**	NA
IMDG-IMO	**UN No.:**	1710	**Class:**	6.1
	Shipping Name:	Trichloroethylene	**Subsidiary Risk:**	NA
	Labeling:	6.1	**Packing Group:**	III
	Packing Instructions:	P001, LP01	**EmS:**	F-A, S-A
	Marine pollutant:	No	**Technical Name:**	NA
IATA - ICAO:	**UN No.:**	1710	**Class:**	6.1
	Shipping Name:	Trichloroethylene	**Subclass:**	NA
	Packing Instructions:	655, 663 (CAO)	**Packing Group:**	III
	Labeling:	Toxic	**Technical Name:**	NA

The preceding information is subject to change and must be verified prior to shipment. It is the responsibility of anyone offering hazardous materials for shipment to ensure compliance with all applicable regulations.

Section 15 • Regulatory Information

U.S. Federal Regulations

RCRA Hazardous Waste No.: D040, D003 (aerosols only)

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA):
Trichloroethylene 79-01-6 100 lbs

Toxic Substances Control Act (TSCA):
All components of this product are TSCA inventory listed and/or are exempt.

Superfund Amendments and Reauthorization Act (SARA) Title III SARA Section 311/312 (40 CFR 370) Hazard Categories:
Sudden Release of Pressure (aerosols only), Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):
Trichloroethylene 79-01-6

Section 112 Hazardous Air Pollutants (HAPs): Trichloroethylene 79-01-6

State Regulations

California: This product contains chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

California and OTC States: This product is for manufacturing use only - not for retail sale.

New Jersey Right to Know:
Aerosol: Trichloroethylene 79-01-6 ● Butylene Oxide 106-88-7 ● Methyl Pyrrole 96-54-8 ● Butanone 78-93-3 ● Carbon Dioxide 124-38-9

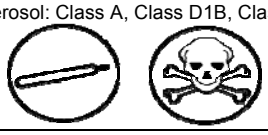
Bulk: Trichloroethylene 79-01-6 ● Butylene Oxide 106-88-7 ● Methyl Pyrrole 96-54-8 ● Butanone 78-93-3

International Regulations

Canadian Environmental Protection Act (CEPA):
All of the components of this product are included on the Canadian Domestic Substances list (DSL).

Canadian Workplace Hazardous Materials Information System WHMIS:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification:
Aerosol: Class A, Class D1B, Class D2A, Class D2B



WHMIS Classification:
Bulk: Class D1B, Class D2A, D2B

Other Regulations:

Montreal Protocol listed ingredients:	None
Stockholm Convention listed ingredients:	None
Rotterdam Convention listed engredients:	None
RoHS Compliant:	Yes

MATERIAL SAFETY DATA SHEET
LPS® HDX

Revision Date: June 17, 2011 **Supersedes:** July 12, 2010

Section 16 • Other Information

MSDS#:	11020	**HMIS 1996**		**HMIS III**		**NFPA**
MSDS Preparation Responsible Name: Elena Badiuzzi Compliance Manager Telephone: +1 770 243-8800		Health:	2	Health:	[*] 2	Flammability
		Flammability:	1	Flammability Aerosol:	1	Health  Reactivity
				Flammability Bulk:	1	
		Reactivity:	0	Physical Hazard Aerosol:	2	
				Physical Hazard Bulk:	0	Special

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.

Elena Badiuzzi, Compliance Manager
LPS Laboratories, a division of Illinois Tool Works

SAFETY DATA SHEET

Power Steering Stop Leak

Section 1. Identification

GHS product identifier : Power Steering Stop Leak

Other means of identification : Not available.

Product number : 10008, 10011, 10143, 10144, 10145, 30008, 30008A, 30008R, 30008O, 30011, 30011A, 30011O

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

Oil Additive

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) : 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 : Substance

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not available.

Product code : Not available.

Ingredient name	%	CAS number
Distillates (petroleum), solvent-refined heavy naphthenic	60 - 100	64741-96-4

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.

Skin contact : Wash contaminated skin with soap and 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.

Section 4. First aid measures

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 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. 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. 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
Distillates (petroleum), solvent-refined heavy naphthenic	**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.

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, 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 : Red. [Light]

Odor : Petroleum.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : >260°C (>500°F)

Flash point : Closed cup: 223.88°C (435°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 : 0.9218

Solubility : Not available.

Solubility in water : Negligible.

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)): 0.45 cm^2/s (45 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.

Section 10. Stability and reactivity

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

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), solvent-refined heavy naphthenic	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

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.

Section 11. Toxicological information

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.

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

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 : 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: Distillates (petroleum), solvent-refined heavy naphthenic

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.

Section 16. Other information

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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History

Date of issue mm/dd/yyyy : 04/15/2013

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.

SAFETY DATA SHEET

Lucas Synthetic SAE 75W-90 Gear Oil

Section 1. Identification

GHS product identifier : Lucas Synthetic SAE 75W-90 Gear Oil

Other means of identification : Lucas Synthetic SAE 75W-90 Gear Oil

Product number : 10047, 20047, 10048, 20048, 10072, 10073, 10074, 10652

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 : Lucas Synthetic SAE 75W-90 Gear Oil

CAS number/other identifiers

CAS number : Not applicable.

Product code : 10047, 20047, 10048, 20048, 10072, 10073, 10074, 10652

Ingredient name	%	CAS number
1-Decene, homopolymer, hydrogenated	60 - 100	68037-01-4
Antimony, dialkyl dithiocarbamate	1 - 5	15890-25-2

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 : 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 : 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.

Section 4. First aid measures

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. 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.

Section 6. Accidental release measures

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.

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
Antimony, dialkyl dithiocarbamate	ACGIH TLV (United States, 3/2012). TWA: 0.5 mg/m³, (as Sb) 8 hours. NIOSH REL (United States, 6/2009). TWA: 0.5 mg/m³, (as Sb) 10 hours. OSHA PEL (United States, 6/2010). TWA: 0.5 mg/m³, (as Sb) 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.

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.

Section 8. Exposure controls/personal protection

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: 198.889°C (390°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	:	0.8939
Solubility	:	Negligible at 25°C
Solubility in water	:	0 g/l
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 : 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

Product/ingredient name	Result	Species	Dose	Exposure
Antimony, dialkyl dithiocarbamate	LD50 Dermal LD50 Oral	Rabbit Rat	16000 mg/kg 16400 mg/kg	- -

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

Name	Result
1-Decene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1

Section 11. Toxicological information

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 : 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.

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

Section 12. Ecological information

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: 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.

New Jersey : The following components are listed: 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

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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History

Date of issue mm/dd/yyyy : 06/16/2013

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

Section 16. Other information

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.

SAFETY DATA SHEET

1. Identification

Product identifier **Heavy Duty Corrosion Inhibitor**

Other means of identification

Product code 76026

Recommended use Corrosion inhibitor

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Canada Co.

Address 2-1246 Lorimar Dr.
Mississauga, Ontario L5S 1R2
Canada

Telephone 905-670-2291

Website www.crc-canada.ca

E-mail Support.CA@crcindustries.com

Emergency phone number 24-Hour Emergency (CHEMTREC) 800-424-9300 (Canada) 703-527-3887 (International)

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
	Physical hazards not otherwise classified	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1 (central nervous system)
	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

Label elements

Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. 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. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility. Causes damage to organs (central nervous system) 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, 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 mist or vapor. 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. Wash thoroughly after handling. 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 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. In case of leakage, eliminate all ignition sources. Collect spillage.
Storage	Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
liquefied petroleum gas		68476-86-8	20 - 30
naphtha (petroleum), hydrotreated light		64742-49-0	10 - 20
stoddard solvent		8052-41-3	10 - 20
2-methylpentane		107-83-5	5 - 10
distillates (petroleum), hydrotreated light		64742-47-8	5 - 10
dipropylene glycol monomethyl ether		34590-94-8	3 - 5
naphtha (petroleum), hydrotreated heavy		64742-48-9	1 - 3
n-hexane		110-54-3	1 - 3
distillates (petroleum), hydrotreated heavy paraffinic		64742-54-7	< 1
distillates (petroleum), hydrotreated light paraffinic		64742-55-8	< 1
petrolatum, micro soft wax		8009-03-8	< 1

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

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. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. 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 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. This liquid may accumulate static electricity when filling properly grounded containers. 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.
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. 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. 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	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. 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. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. 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. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. 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 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. 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. 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

ACGIH

Components	Type	Value	Form
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	TWA	5 mg/m3	Inhalable fraction

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2-methylpentane (CAS 107-83-5)	STEL	1000 ppm	
	TWA	500 ppm	
dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	150 ppm	
	TWA	100 ppm	
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	TWA	5 mg/m3	Inhalable fraction.
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)	TWA	5 mg/m3	Inhalable fraction.
n-hexane (CAS 110-54-3)	TWA	50 ppm	
petrolatum, micro soft wax (CAS 8009-03-8)	TWA	5 mg/m3	Inhalable fraction.
stoddard solvent (CAS 8052-41-3)	TWA	100 ppm	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
2-methylpentane (CAS 107-83-5)	STEL	3500 mg/m3	
		1000 ppm	
	TWA	1760 mg/m3	
		500 ppm	
dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	909 mg/m3	
		150 ppm	
	TWA	606 mg/m3	
		100 ppm	
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	200 mg/m3	Vapor.
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	TWA	1590 mg/m3	
		400 ppm	
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	TWA	1590 mg/m3	
		400 ppm	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
n-hexane (CAS 110-54-3)	TWA	176 mg/m3 50 ppm	
petrolatum, micro soft wax (CAS 8009-03-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
stoddard solvent (CAS 8052-41-3)	TWA	572 mg/m3 100 ppm	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
2-methylpentane (CAS 107-83-5)	TWA	200 ppm	
dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	150 ppm	
	TWA	100 ppm	
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	TWA	1 mg/m3	Mist.
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	200 mg/m3	Non-aerosol.
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)	TWA	0.2 mg/m3	Mist.
n-hexane (CAS 110-54-3)	TWA	20 ppm	
stoddard solvent (CAS 8052-41-3)	STEL	580 mg/m3	
	TWA	290 mg/m3	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
2-methylpentane (CAS 107-83-5)	STEL	1000 ppm	
	TWA	500 ppm	
dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	150 ppm	
	TWA	100 ppm	
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	TWA	5 mg/m3	Inhalable fraction.
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)	TWA	5 mg/m3	Inhalable fraction.
n-hexane (CAS 110-54-3)	TWA	50 ppm	
petrolatum, micro soft wax (CAS 8009-03-8)	TWA	5 mg/m3	Inhalable fraction.
stoddard solvent (CAS 8052-41-3)	TWA	100 ppm	

Canada - Ontario

Components	Type	Value
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	STEL	10 mg/m3
	TWA	5 mg/m3

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
2-methylpentane (CAS 107-83-5)	STEL	1000 ppm	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
	TWA	500 ppm	
dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	150 ppm	
	TWA	100 ppm	
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	TWA	5 mg/m3	Inhalable fraction.
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	TWA	525 mg/m3	
n-hexane (CAS 110-54-3)	TWA	50 ppm	
stoddard solvent (CAS 8052-41-3)	TWA	100 ppm	

Canada - Quebec

Components	Type	Value
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	STEL	10 mg/m3
	TWA	5 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
2-methylpentane (CAS 107-83-5)	STEL	3500 mg/m3	
		1000 ppm	
	TWA	1760 mg/m3	
		500 ppm	
dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	909 mg/m3	
		150 ppm	
	TWA	606 mg/m3	
		100 ppm	
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)	TWA	1590 mg/m3	
		400 ppm	
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	TWA	1590 mg/m3	
		400 ppm	
n-hexane (CAS 110-54-3)	TWA	176 mg/m3	
		50 ppm	
petrolatum, micro soft wax (CAS 8009-03-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
stoddard solvent (CAS 8052-41-3)	TWA	525 mg/m3	
		100 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Canada - Alberta OELs: Skin designation

dipropylene glycol monomethyl ether (CAS 34590-94-8)	Can be absorbed through the skin.
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	Can be absorbed through the skin.
n-hexane (CAS 110-54-3)	Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

dipropylene glycol monomethyl ether (CAS 34590-94-8)	Can be absorbed through the skin.
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	Can be absorbed through the skin.
n-hexane (CAS 110-54-3)	Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

dipropylene glycol monomethyl ether (CAS 34590-94-8)	Can be absorbed through the skin.
n-hexane (CAS 110-54-3)	Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

dipropylene glycol monomethyl ether (CAS 34590-94-8)	Can be absorbed through the skin.
n-hexane (CAS 110-54-3)	Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

dipropylene glycol monomethyl ether (CAS 34590-94-8)	Can be absorbed through the skin.
n-hexane (CAS 110-54-3)	Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

dipropylene glycol monomethyl ether (CAS 34590-94-8)	Can be absorbed through the skin.
distillates (petroleum), hydrotreated light (CAS 64742-47-8)	Can be absorbed through the skin.
n-hexane (CAS 110-54-3)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

dipropylene glycol monomethyl ether (CAS 34590-94-8)	Can be absorbed through the skin.
n-hexane (CAS 110-54-3)	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 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: Neoprene. 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 eat, drink or smoke. 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	Dark amber.
Odor	Petroleum.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-244.7 °F (-153.7 °C) estimated

Initial boiling point and boiling range	118.4 °F (48 °C) estimated
Flash point	< 0 °F (< -17.8 °C) Tag Closed Cup
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0.7 % estimated
Flammability limit - upper (%)	14 % estimated
Vapor pressure	1451.5 hPa estimated
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	404.6 °F (207 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Percent volatile	79.2 % estimated
VOC (Weight %)	28.4 % estimated 28.4 % Switzerland 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. Contact with incompatible materials.
Incompatible materials	Strong oxidizing 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 by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
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. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. 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
dipropylene glycol monomethyl ether (CAS 34590-94-8)		
Acute		
Dermal		
LD50	Rabbit	9510 mg/kg

Components	Species	Test Results
Inhalation		
LC50	Rat	552 ppm
Oral		
LD50	Rat	5135 mg/kg
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	> 15000 mg/kg
distillates (petroleum), hydrotreated light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Rat	> 5.2 mg/l, 4 hours
Oral		
LD50	Rat	> 5000 mg/kg, 2.5 hours
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 5 mg/l
Oral		
LD50	Rat	> 5000 mg/kg
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	61 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)		
Acute		
Inhalation		
LC50	Rat	61 mg/l, 4 Hours
Oral		
LD50	Rat	> 25 ml/kg
n-hexane (CAS 110-54-3)		
Acute		
Dermal		
LD50	Rabbit	> 1300 mg/kg
Inhalation		
LC50	Rat	< 48000 ppm, 4 Hours
Oral		
LD50	Rat	15840 mg/kg

Components	Species	Test Results
stoddard solvent (CAS 8052-41-3)		
Acute		
Dermal		
LD50	Rabbit	> 3000 mg/kg
Inhalation		
LC50	Rat	> 5500 mg/m³, 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 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

ACGIH Carcinogens

distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	A4 Not classifiable as a human carcinogen.
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)	A4 Not classifiable as a human carcinogen.
petrolatum, micro soft wax (CAS 8009-03-8)	A2 Suspected human carcinogen. A4 Not classifiable as a human carcinogen.

Canada - Manitoba OELs: carcinogenicity

distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	Not classifiable as a human carcinogen.
distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)	Not classifiable as a human carcinogen.
petrolatum, micro soft wax (CAS 8009-03-8)	Not classifiable as a human carcinogen. Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)	3 Not classifiable as to carcinogenicity to humans.
stoddard solvent (CAS 8052-41-3)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Suspected of damaging fertility.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Causes damage to organs (central nervous system) through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Causes damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
2-methylpentane (CAS 107-83-5)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	1 - 10 mg/l, 48 hours
Fish	LC50	Fish	1 - 10 mg/l, 96 hours

Components		Species	Test Results
dipropylene glycol monomethyl ether (CAS 34590-94-8)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	> 5000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	10000 mg/l, 96 hours
distillates (petroleum), hydrotreated heavy paraffinic (CAS 64742-54-7)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
distillates (petroleum), hydrotreated light (CAS 64742-47-8)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	45 mg/l, 96 hours
naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	2.7 - 5.1 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8.8 mg/l, 96 hours
			8.8 mg/l, 96 hours
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	1 - 10 mg/l, 48 hours
Fish	LC50	Fish	1 - 10 mg/l, 96 hours
n-hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 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-methylpentane	3.74
n-hexane	3.9
stoddard solvent	3.16 - 7.15
Bioconcentration factor (BCF)	
naphtha (petroleum), hydrotreated light	10 - 25000

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 Contents under pressure. Do not puncture, incinerate or crush. Empty container can be recycled. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

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

TDG

UN number UN1950

UN proper shipping name	AEROSOLS, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	80

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.
Environmental hazards	No.
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	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

Canadian regulations

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

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	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

Issue date 10-14-2016

Version # 01

Further information CRC # 522G-H

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 Canada Co..

SAFETY DATA SHEET

1. Identification

Product number	10000028754
Product identifier	**11 OZ NAPA MAC'S OPEN GEAR LUBE 1366**
Revision date	09-29-2016
Company information	NAPA Balkamp 2601 Stout Heritage Parkway Plainfield, IN 46168 United States
Company phone	General Assistance 1-317-754-3900
Emergency telephone US	1-866-836-8855
Emergency telephone outside US	1-952-852-4646
Version #	02
Supersedes date	06-17-2016
Recommended use	LUBRICANT
Recommended restrictions	None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Reproductive toxicity (fertility, the unborn child)	Category 2
	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. Harmful if inhaled. Suspected of damaging the unborn child. Suspected of damaging fertility.
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. Avoid breathing gas. Wash thoroughly after handling. 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. 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 contaminated clothing and wash before reuse.
Storage	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)	Combustible.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (Petroleum), Hydrotreated Light		64742-47-8	20 - 40
Asphalt		8052-42-4	10 - 20
Acetone		67-64-1	2.5 - 10
Butane		106-97-8	2.5 - 10
Heptane, branched, cyclic and linear		426260-76-6	2.5 - 10
Propane		74-98-6	2.5 - 10
Cyclohexane		110-82-7	1 - 2.5
n-Heptane		142-82-5	1 - 2.5
n-Hexane		110-54-3	0.1 - 1
Toluene		108-88-3	0.1 - 1
Other components below reportable levels			20 - 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. Oxygen or artificial respiration if needed. 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. 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 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	Alcohol resistant foam. Dry powder. Dry chemicals. 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. Cool containers exposed to heat with water spray and remove container, if no risk is involved. 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 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.

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. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. 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 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 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
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3 300 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3 500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 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	Form
Acetone (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	0.5 mg/m3	Inhalable fraction.
Butane (CAS 106-97-8)	STEL	1000 ppm	
Cyclohexane (CAS 110-82-7)	TWA	100 ppm	
n-Heptane (CAS 142-82-5)	STEL	500 ppm	
	TWA	400 ppm	
n-Hexane (CAS 110-54-3)	TWA	50 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Acetone (CAS 67-64-1)	TWA	590 mg/m3 250 ppm	
Asphalt (CAS 8052-42-4)	Ceiling	5 mg/m3	Fume.
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm	
Cyclohexane (CAS 110-82-7)	TWA	1050 mg/m3 300 ppm	
n-Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3 440 ppm	
	TWA	350 mg/m3 85 ppm	
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3 50 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	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	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

n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
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.

US ACGIH Threshold Limit Values: Skin designation

n-Hexane (CAS 110-54-3)	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. 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	520.62 °F (271.46 °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 (%)	1.3 % estimated
Flammability limit - upper (%)	9.6 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	30 psig @70F 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.
Flame extension	20 in estimated
Heat of combustion (NFPA 30B)	33.2 kJ/g estimated
Oxidizing properties	Not oxidizing.
Specific gravity	0.807 estimated

VOC (Weight %)	24.5 % 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.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
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. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Harmful if inhaled.

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
		2.2 ml/kg
Asphalt (CAS 8052-42-4)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 94.4 mg/m3
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l

Components	Species	Test Results
Cyclohexane (CAS 110-82-7)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 32880 mg/m3, 4 Hours
		> 5540 ppm, 4 Hours
Oral		
LD50	Rabbit	> 5000 mg/kg
	Rat	> 5000 mg/kg
Distillates (Petroleum), Hydrotreated Light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
		> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 7.5 mg/l, 6 Hours
		> 4.6 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 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
n-Hexane (CAS 110-54-3)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 4 Hours
		> 5 ml/kg, 4 Hours
Inhalation		
LC50	Rat	> 5000 ppm, 24 Hours
		> 31.86 mg/l
		73860 ppm, 4 Hours
Oral		
LD50	Rat	24 ml/kg
		24 g/kg
	Wistar rat	49 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

Components	Species	Test Results
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 Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Asphalt (CAS 8052-42-4)	2B Possibly carcinogenic to humans.
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 Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged exposure may cause chronic effects.

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
Cyclohexane (CAS 110-82-7)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	23.03 - 42.07 mg/l, 96 hours
Distillates (Petroleum), Hydrotreated Light (CAS 64742-47-8)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours

Components		Species	Test Results
n-Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 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
Butane	2.89
Cyclohexane	3.44
n-Heptane	4.66
n-Hexane	3.9
Propane	2.36
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. 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 and both may be displayed concurrently.

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.
Cyclohexane (CAS 110-82-7)	Listed.
n-Hexane (CAS 110-54-3)	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.
Cyclohexane	110-82-7	1 - 2.5
n-Hexane	110-54-3	0.1 - 1
Toluene	108-88-3	0.1 - 1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)

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.

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)
Asphalt (CAS 8052-42-4)
Butane (CAS 106-97-8)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Asphalt (CAS 8052-42-4)
Butane (CAS 106-97-8)
Cyclohexane (CAS 110-82-7)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)
Toluene (CAS 108-88-3)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Asphalt (CAS 8052-42-4)
Butane (CAS 106-97-8)
Cyclohexane (CAS 110-82-7)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)
Toluene (CAS 108-88-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Asphalt (CAS 8052-42-4)
Butane (CAS 106-97-8)
Cyclohexane (CAS 110-82-7)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)
Toluene (CAS 108-88-3)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Butane (CAS 106-97-8)
Cyclohexane (CAS 110-82-7)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)
Toluene (CAS 108-88-3)

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

Toluene (CAS 108-88-3)	Listed: January 1, 1991

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)	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	06-17-2016
Revision date	09-29-2016
Version #	02
Disclaimer	We 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.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.

SAFETY DATA SHEET

1. Identification

Product number 1000036041

Product identifier **11.5 OZ MACS DEICER 7000 LT 12PK**

Company information NAPA BALKAMP
2601 Stout Heritage Parkway
Plainfield, IN 46168 United States

Company phone General Assistance 1-317-754-3900

Emergency telephone US 1-866-836-8855

Emergency telephone outside US 1-952-852-4646

Version # 01

Recommended use Not available.

Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable aerosol. 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 gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/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. 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 None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isopropyl Alcohol		67-63-0	40 - 60
Carbon Dioxide		124-38-9	2.5 - 10
Ethylene Glycol		107-21-1	2.5 - 10
Other components below reportable levels			20 - 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 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.

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.

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 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. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers.

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 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 gas. Avoid contact with eyes. Avoid prolonged exposure. 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.

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
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm
Isopropyl Alcohol (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm	
	TWA	5000 ppm	
Ethylene Glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 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
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropyl Alcohol (CAS 67-63-0)	40 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. 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 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	63.6 °F (17.6 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	2.5 % estimated
Flammability limit - upper (%)	12 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	110 - 130 psig @20C estimated
Vapor density	Not available.
Relative density	15.859 estimated
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	797 °F (425 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Heat of combustion (NFPA 30B)	15.83 kJ/g estimated
Oxidizing properties	Not oxidizing.
Specific gravity	0.897 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	Strong oxidizing agents. Isocyanates. 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.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
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 Narcotic effects.

Components	Species	Test Results
Ethylene Glycol (CAS 107-21-1)		
Acute		
Dermal		
LD50	Mouse	> 3500 mg/kg
Inhalation		
LC50	Rat	> 2.5 mg/l, 6 Hours
Oral		
LD50	Rat	7712 mg/kg
Isopropyl Alcohol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	16.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	> 10000 ppm, 6 Hours
Oral		
LD50	Rat	5.84 g/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 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	Not likely, due to the form of the product.

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
Ethylene Glycol (CAS 107-21-1)			
Aquatic			
Crustacea	EC50	Daphnia	46300 mg/L, 48 Hours
Fish	LC50	Fathead minnow (Pimephales promelas)	8050 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)

Ethylene Glycol	-1.36
Isopropyl Alcohol	0.05

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 UN1993
UN proper shipping name Flammable liquids, n.o.s. (Isopropyl Alcohol)
Transport hazard class(es)
Class 3
Subsidiary risk -
Label(s) 3
Packing group II
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions IB2, T7, TP1, TP8, TP28
Packaging exceptions 150
Packaging non bulk 202
Packaging bulk 242

IATA

UN number UN1993
UN proper shipping name Flammable liquid, n.o.s. (Isopropyl Alcohol)

Transport hazard class(es)

Class	3
Subsidiary risk	-

Packing group II
Environmental hazards No.
ERG Code 3H
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.

IMDG

UN number UN1993
UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Isopropyl Alcohol)
Transport hazard class(es)

Class	3
Subsidiary risk	-

Packing group II
Environmental hazards

Marine pollutant	No

EmS F-E, S-E
Special precautions for user Read safety instructions, SDS and emergency procedures before handling. 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.

DOT

IATA; IMDG

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)

Ethylene Glycol (CAS 107-21-1) 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)

Chemical name	CAS number	% by wt.
Ethylene Glycol	107-21-1	2.5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Ethylene Glycol (CAS 107-21-1)

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

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))

Ethylene Glycol (CAS 107-21-1)
Isopropyl Alcohol (CAS 67-63-0)

US. Massachusetts RTK - Substance List

Carbon Dioxide (CAS 124-38-9)
Ethylene Glycol (CAS 107-21-1)
Isopropyl Alcohol (CAS 67-63-0)

US. New Jersey Worker and Community Right-to-Know Act

Carbon Dioxide (CAS 124-38-9)
Ethylene Glycol (CAS 107-21-1)
Isopropyl Alcohol (CAS 67-63-0)

US. Pennsylvania Worker and Community Right-to-Know Law

Carbon Dioxide (CAS 124-38-9)
Ethylene Glycol (CAS 107-21-1)
Isopropyl Alcohol (CAS 67-63-0)

US. Rhode Island RTK

Ethylene Glycol (CAS 107-21-1)
Isopropyl Alcohol (CAS 67-63-0)

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

Ethylene Glycol (CAS 107-21-1) Listed: June 19, 2015

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 01-26-2018

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.

MASTER 25% STARTING FLUID 11 OZ.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 08/04/2014 : Version:

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

1.1. Product identifier

Product form : Mixture

Trade name : MASTER 25% STARTING FLUID 11 OZ.

Product code : SF-16

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

Use of the substance/mixture : Starting Fluid

1.3. Details of the supplier of the safety data sheet

Master Chemical
4635 Willow Drive
Medina, MN 55340 - USA
T: 612-478-2360

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Aerosol 1	H222
Compressed gas	H280
Skin Irrit. 2	H315
Muta. 1B	H340
Carc. 1A	H350
Repr. 2	H361
STOT SE 3	H336
STOT RE 2	H373

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02 GHS04 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :
H222 - Extremely flammable aerosol
H280 - Contains gas under pressure; may explode if heated
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) :
P201 - Obtain special instructions
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
P260 - Do not breathe dust,fumes,gas,mist,vapor spray
P261 - Avoid breathing dust,fume,gas,mist,vapor spray
P264 - Wash affected areas thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves,protective clothing,eye protection,face protection
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
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment: See section 4.1 on this label
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up
P410+P403 - Protect from sunlight. Store in a well-ventilated place
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
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 : Contains gas under pressure; may explode if heated.

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	%	Classification (GHS-US)
Heptane, branched cyclic	(CAS No) 426260-76-6	44.64 - 46.5	Flam. Liq. 1, H224 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
diethyl ether	(CAS No) 60-29-7	10 - 30	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302
Petroleum gases, liquefied, sweetened	(CAS No) 68476-86-8	10 - 30	Flam. Gas 1, H220 Flam. Liq. 1, H224 Muta. 1B, H340 Carc. 1A, H350
heptane	(CAS No) 142-82-5	11.625 - 20.925	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
carbon dioxide, liquefied, under pressure	(CAS No) 124-38-9	5 - 10	Compressed gas, H280
Toluene	(CAS No) 108-88-3	0.465 - 1.86	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
distillates (petroleum), hydrotreated heavy naphthenic	(CAS No) 64742-52-5	< 1	Not classified

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 : Cough. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment: See section 4.1 on this label.

First-aid measures after eye contact : Direct contact with the eyes is likely to be irritating. 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 : May cause genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to organs.

Symptoms/injuries after inhalation : Shortness of breath. May cause cancer by inhalation. May cause drowsiness or dizziness.

Symptoms/injuries after skin contact : Causes skin irritation.

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

Fire hazard : Extremely flammable liquid and vapor. Extremely flammable aerosol.

Explosion hazard : May form flammable/explosive vapor-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

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. DO NOT fight fire when fire reaches explosives. Evacuate area.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Aerosol level 3.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No naked lights. No smoking. 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

Protective equipment : Gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust,fume,gas,mist,vapor spray.

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.

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

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Hazardous waste due to potential risk of explosion. Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling : No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. 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. Do not spray on an open flame or other ignition source. Obtain special instructions . Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Avoid breathing dust,fume,gas,mist,vapor spray. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash affected areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting 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 : Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.

Storage area : Store in a well-ventilated place.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

diethyl ether (60-29-7)		
USA ACGIH	ACGIH TWA (mg/m³)	1200

diethyl ether (60-29-7)		
USA ACGIH	ACGIH TWA (ppm)	400 ppm
USA ACGIH	ACGIH STEL (mg/m³)	1500 mg/m³
USA ACGIH	ACGIH STEL (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	1200 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	400 ppm

Toluene (108-88-3)		
USA ACGIH	ACGIH TWA (mg/m³)	37 mg/m³
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (mg/m³)	560
USA ACGIH	ACGIH STEL (ppm)	150 ppm
USA ACGIH	ACGIH Ceiling (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm

heptane (142-82-5)		
USA ACGIH	ACGIH TWA (ppm)	400 ppm
USA ACGIH	ACGIH STEL (ppm)	400 ppm

Heptane, branched cyclic (426260-76-6)		
USA ACGIH	ACGIH TWA (ppm)	400 ppm
USA ACGIH	ACGIH STEL (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm

Petroleum gases, liquefied, sweetened (68476-86-8)		
USA ACGIH	ACGIH TWA (ppm)	1000 ppm Listed under Aliphatic hydrocarbon gases alkane C1-C4
USA OSHA	OSHA PEL (TWA) (mg/m³)	1800 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

carbon dioxide, liquefied, under pressure (124-38-9)		
USA ACGIH	ACGIH TWA (mg/m³)	9000 mg/m³
USA ACGIH	ACGIH TWA (ppm)	5000 ppm
USA ACGIH	ACGIH STEL (mg/m³)	54000
USA ACGIH	ACGIH STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	9000 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

8.2. Exposure controls

Appropriate engineering controls : Local exhaust venilation, vent hoods.

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 : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

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	:	Gas
Appearance	:	Colorless to pale yellow liquid.
Color	:	Colourless to light yellow.
Odor	:	Sweet.
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	:	-42 °C (LOWEST COMPONENT)
Flash point	:	< -23 °C
Auto-ignition temperature	:	180 °C (LOWEST COMPONENT)
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	> 1.5
Relative density	:	No data available
Solubility	:	Poorly soluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	Heating may cause an explosion. Heating may cause a fire.
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

VOC content : 93.3 % CARB METHOD 310

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Extremely flammable liquid and vapor. May form flammable/explosive vapor-air mixture. Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

May release flammable gases. Toxic fume. . Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

diethyl ether (60-29-7)	
LD50 oral rat	1215 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 1600 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 14200 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	99 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	32000 ppm/4h (Rat)

Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg body weight
LD50 dermal rabbit	> 5000 mg/kg body weight LD50 quoted as 14.1 mL/kg (12267 mg/kg using density of 0.87)
LC50 inhalation rat (mg/l)	> 28.1 mg/l/4h (Rat; Air, Literature study)

heptane (142-82-5)	
LD50 oral rat	> 15000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; >5000 mg/kg bodyweight; Rat; Read-across)
LD50 dermal rabbit	> 3160 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >2000 mg/kg bodyweight; Rabbit; Read-across)
LC50 inhalation rat (mg/l)	103 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	25000 ppm/4h (Rat; Literature study)

Heptane, branched cyclic (426260-76-6)	
LD50 oral rat	> 15000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; >5000 mg/kg bodyweight; Rat; Read-across)
LD50 dermal rabbit	> 3160 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >2000 mg/kg bodyweight; Rabbit; Read-across)
LC50 inhalation rat (mg/l)	103 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	25000 ppm/4h (Rat; Literature study)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : May cause genetic defects.Based on available data, the classification criteria are not met

Carcinogenicity : May cause cancer.

Toluene (108-88-3)	
IARC group	3

distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)	
IARC group	3

Reproductive toxicity : Suspected of damaging fertility or the unborn child.Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.Based on available data, the classification criteria are not met
May cause damage to organs through prolonged or repeated exposure

Aspiration hazard : Not classifiedBased on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Shortness of breath. May cause cancer by inhalation. May cause drowsiness or dizziness.

Symptoms/injuries after skin contact : Causes skin irritation.

SECTION 12: Ecological information

12.1. Toxicity

diethyl ether (60-29-7)	
LC50 fish 1	> 10000 ppm (96 h; Lepomis macrochirus)
EC50 Daphnia 1	165 mg/l (24 h; Daphnia magna)
LC50 fish 2	2560 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 2	1380 mg/l (48 h; Daphnia magna)
TLM fish 1	> 1000 mg/l (96 h; Pisces)
TLM other aquatic organisms 1	> 1000 mg/l (96 h)

Toluene (108-88-3)	
LC50 fish 1	24 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	84 mg/l (24 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	11.5 - 19.6 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	> 400 mg/l (168 h; Scenedesmus quadricauda; Toxicity test)
Threshold limit algae 2	105 mg/l (192 h; Microcystis aeruginosa)

heptane (142-82-5)	
LC50 fish 1	375 mg/l (96 h; Tilapia mosambica; Nominal concentration)

heptane (142-82-5)	
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
EC50 Daphnia 1	1.5 mg/l (48 h; Daphnia magna)
LC50 fish 2	> 100 mg/l (96 h; Oncorhynchus kisutch)
TLM fish 1	4924 mg/l (48 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit algae 1	> 200 mg/l (Scenedesmus quadricauda; Toxicity test)
Threshold limit algae 2	1.5 mg/l (8 h; Algae; Photosynthesis)

carbon dioxide, liquefied, under pressure (124-38-9)	
LC50 fish 1	35 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)
LC50 fish 2	60 - 240 mg/l (12 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)

12.2. Persistence and degradability

MASTER 25% STARTING FLUID 11 OZ.	
Persistence and degradability	Not established.

diethyl ether (60-29-7)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available. Reacts with air.
Biochemical oxygen demand (BOD)	0.03 g O_2 /g substance
Chemical oxygen demand (COD)	0.026 g O_2 /g substance (KMnO4)
ThOD	2.60 g O_2 /g substance
BOD (% of ThOD)	0.012 % ThOD

Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	2.15 g O_2 /g substance
Chemical oxygen demand (COD)	2.52 g O_2 /g substance
ThOD	3.13 g O_2 /g substance
BOD (% of ThOD)	0.69 % ThOD

heptane (142-82-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	1.92 g O_2 /g substance
Chemical oxygen demand (COD)	0.06 g O_2 /g substance
ThOD	3.52 g O_2 /g substance
BOD (% of ThOD)	> % ThOD (5 day(s)) > 0.5

Heptane, branched cyclic (426260-76-6)	
Persistence and degradability	May cause long-term adverse effects in the environment.

Petroleum gases, liquefied, sweetened (68476-86-8)	
Persistence and degradability	Not established.

carbon dioxide, liquefied, under pressure (124-38-9)	
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
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

MASTER 25% STARTING FLUID 11 OZ.	
Bioaccumulative potential	Not established.

diethyl ether (60-29-7)	
BCF fish 1	0.9 - 9.1 (Cyprinus carpio; Test duration: 6 weeks)
Log Pow	0.82 - 0.89 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Toluene (108-88-3)	
BCF fish 1	13.2 (Anguilla japonica)
BCF fish 2	90 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	380 (24 h; Chlorella sp.; Fresh weight)
BCF other aquatic organisms 2	4.2 (Mytilus edulis; Fresh weight)

Toluene (108-88-3)	
Log Pow	2.73 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

heptane (142-82-5)	
BCF other aquatic organisms 1	552
Log Pow	4.66 (Experimental value; 4.5; Literature)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

Heptane, branched cyclic (426260-76-6)	
Bioaccumulative potential	Not established.

Petroleum gases, liquefied, sweetened (68476-86-8)	
Bioaccumulative potential	Not established.

carbon dioxide, liquefied, under pressure (124-38-9)	
Log Pow	0.83 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

diethyl ether (60-29-7)	
Surface tension	0.017 N/m (20 °C)

Toluene (108-88-3)	
Surface tension	0.03 N/m (20 °C)

heptane (142-82-5)	
Surface tension	0.020 N/m (20 °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. Container under pressure. Do not drill or burn even after use. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Additional information : Handle empty containers with care because residual vapors are flammable. Flammable vapors may accumulate in the container.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.1, Limited Quantity

ICAO/IATA (air): UN1950, Aerosols, 2.1, Limited Quantity

IMO/IMDG (water): UN1950, Aerosols, 2.1, Limited Quantity

Special Provisions: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

14.2. UN proper shipping name

DOT Proper Shipping Name : Aerosols
flammable, n.o.s. (engine starting fluid) (each not exceeding 1 L capacity)

Department of Transportation (DOT) Hazard Classes : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas

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) : 304

DOT Packaging Bulk (49 CFR 173.xxx) : None

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

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 : 48 - Stow ‘‘away from’’ sources of heat,87 - Stow ‘‘separated from’’ Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg

SECTION 15: Regulatory information

15.1. US Federal regulations

MASTER 25% STARTING FLUID 11 OZ.	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard Sudden release of pressure hazard

diethyl ether (60-29-7)	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard

Toluene (108-88-3)	
Listed on United States SARA Section 313 Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard

Heptane, branched cyclic (426260-76-6)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

Petroleum gases, liquefied, sweetened (68476-86-8)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Fire hazard Sudden release of pressure hazard

15.2. International regulations

CANADA

MASTER 25% STARTING FLUID 11 OZ.	
WHMIS Classification	Class B Division 5 - Flammable Aerosol Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Toluene (108-88-3)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Heptane, branched cyclic (426260-76-6)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

EU-Regulations

Toluene (108-88-3)
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 or 1999/45/EC

Carc.Cat.1; R45
Muta.Cat.2; R46
Repr.Cat.3; R63
F+; R12
Xn; R22
Xi; R38
R19

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

15.3. US State regulations

MASTER 25% STARTING FLUID 11 OZ.()	
U.S. - California - Proposition 65 - Carcinogens List	Yes
State or local regulations	U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Toluene (108-88-3)
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

SECTION 16: Other information

Indication of changes : Revision - See : *.

Training advice : Ensure operators understand the flammability hazard. Ensure operators understand the hazard of oxygen enrichment. Receptacle under pressure.

Other information : None.

Full text of H-phrases: see section 16:

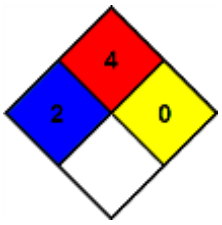
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Compressed gas	Gases under pressure Compressed gas
Flam. Aerosol 1	Flammable aerosol Category 1
Flam. Gas 1	Flammable gases Category 1
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
Muta. 1B	Germ cell mutagenicity Category 1B
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H220	Extremely flammable gas
H222	Extremely 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
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

H412	Harmful to aquatic life with long lasting effects

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 : 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.

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 : 4 Severe Hazard

Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012)

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

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: **MOBILGREASE 28**
Product Description: Synthetic Base Stocks and Additives
Product Code: 201550402020, 530626-85
Intended Use: Grease

COMPANY IDENTIFICATION

Supplier: **Aviall Australia Pty. Limited**
20-22 Lindaway Place
Tullamarine
Victoria 3043 Australia

Product Technical Information	(8:00am to 4:30pm Mon to Fri)	1300 919 904
Supplier General Contact	(03) 9339 3000	

SECTION 2 HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see (M)SDS Section 15).

Contains: N-PHENYL-1-NAPHTHYLAMINE May produce an allergic reaction.

Other hazard information:

Physical / Chemical Hazards:
No significant hazards.

Health Hazards:
High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation. Secondary amines or materials containing secondary amines should not be added to this product due to the risk of forming nitrosamines, some of which have been shown to be carcinogenic in lab animals.

Environmental Hazards:
Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

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.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
N-PHENYL-1-NAPHTHYLAMINE	90-30-2	0.1 - < 1%	H302, H317, H373, H400(M factor 1), H410(M factor 1)
N-OLEYLSARCOSINE	110-25-8	0.1 - < 1%	H315, H318, H332, H400(M factor 1), H412
PENTAERYTHRITOL	115-77-5	1 - < 5%	None
SODIUM NITRITE	7632-00-0	0.1 - < 1%	H272(2)(S), H301, H319(2A), H400(M factor 1)
SODIUM PHOSPHATE, TRIBASIC	10101-89-0	0.1 - < 1%	H315, H319(2A), H335

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Other ingredients determined not to be hazardous up to 100%.

SECTION 4 FIRST AID MEASURES

INHALATION

Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

NOTE TO PHYSICIAN

None

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.

Hazardous Combustion Products: Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, Sulphur oxides

FLAMMABILITY PROPERTIES

Flash Point [Method]: >204°C (400°F) [EST. FOR OIL, ASTM D-92 (COC)]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0
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

Avoid contact with spilled 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: Stop leak if you can do so without risk. Scrape up spilled material with shovels into a suitable container for recycle or disposal.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface

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

Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Prevent small spills and leakage to avoid slip hazard. Contains Sodium nitrite. Do not add amines which may form cancer causing nitrosamines.

Static Accumulator: This material is not a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source
PENTAERYTHRITOL	Inhalable dust.	TWA	10 mg/m3			Australia WES
PENTAERYTHRITOL		TWA	10 mg/m3			ACGIH
SODIUM PHOSPHATE, TRIBASIC		STEL	5 mg/m3			OARS WEEL

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Biological limits

No biological limits allocated.

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:
Particulate
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:
Nitrile,Viton

No protection is ordinarily required under normal conditions of use.

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:
No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

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: Solid
Form: Semi-fluid
Colour: Dark Red
Odour: Characteristic
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15.6 °C): 0.945 [Calculated]
Flammability (Solid, Gas): N/A
Flash Point [Method]: >204°C (400°F) [EST. FOR OIL, ASTM D-92 (COC)]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0
Autoignition Temperature: N/D
Boiling Point / Range: > 316°C (600°F) [Estimated]
Decomposition Temperature: N/D
Vapour Density (Air = 1): > 2 at 101 kPa
Vapour Pressure: < 0.013 kPa (0.1 mm Hg) at 20 ºC
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: 29.3 cSt (29.3 mm2/sec) at 40 ºC | 5.7 cSt (5.7 mm2/sec) at 100°C [Estimated]
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/D

NOTE: Most physical properties above are for the oil component in the material.

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

INCOMPATIBLE MATERIALS: Strong oxidisers

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.	Negligible hazard at ambient/normal handling temperatures.
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.	Negligible irritation to skin at ambient temperatures. 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. Based on assessment of the components.
Aspiration: Data available.	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.

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
N-PHENYL-1-NAPHTHYLAMINE	Oral Lethality: LD 50 1625 mg/kg (Rat)

OTHER INFORMATION

For the product itself:

Component concentrations in this formulation would not be expected to cause skin sensitization, based on tests of the components, this formulation, or similar formulations.

Contains:

Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitising in test animals and humans. N-phenyl-1-naphthylamine (PAN): A single oral overexposure may result in clinical signs/symptoms of cyanosis, headache, shallow respiration, dizziness, confusion, low blood pressure, convulsions, coma, or jaundice. Hematuria may occur due to bladder and kidney irritation, and anemia may develop later. Repeated exposure in laboratory animals caused liver and kidney damage and depressed bone marrow activity. Undiluted PAN is a skin sensitiser. Human testing of lubricants containing 1.0% PAN resulted in no reactions indicative of sensitisation. Phenyl-alpha-naphthylamine (PAN): Undiluted PAN is a skin sensitizer. Human testing with lubricants containing 1.0% PAN caused no reactions indicative of sensitization. SODIUM NITRITE: Ingestion of sodium nitrite may reduce the oxygen-carrying capacity of blood and may cause cyanosis (bluish skin), shortness of breath, palpitations, coma, and/or death.

IARC Classification:

The following ingredients are cited on the lists below:

--REGULATORY LISTS SEARCHED--

1 = IARC 1 2 = IARC 2A 3 = IARC 2B

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

ECOTOXICITY

Material -- Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

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

Suitable routes of disposal are supervised incineration, preferentially with energy recovery, or appropriate recycling methods in accordance with applicable regulations and material characteristics at the time of disposal.

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 (ADG) : 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

This material is not considered hazardous according to Australia Model Work Health and Safety Regulations.

Product is not regulated according to Australian Dangerous Goods Code.

No Poison Schedule number allocated by the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA): AIIC, DSL, ENCS, IECSC, ISHL, TCSI, TSCA

Special Cases:

Inventory	Status
KECI	Restrictions Apply

SECTION 16 OTHER INFORMATION

KEY TO ABBREVIATIONS AND ACRONYMS:

N/D = Not determined, N/A = Not applicable, STEL = Short-Term Exposure Limit, TWA = Time-Weighted Average

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):
H272(2): May intensify fire; oxidizer; Oxidizing Solid, Cat 2
H301: Toxic if swallowed; Acute Tox Oral, Cat 3
H302: Harmful if swallowed; Acute Tox Oral, Cat 4
H315: Causes skin irritation; Skin Corr/Irritation, Cat 2
H317: May cause allergic skin reaction; Skin Sensitisation, Cat 1
H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1
H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2A
H335: May cause respiratory irritation; Target Organ Single, Resp Irr
H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2
H400: Very toxic to aquatic life; Acute Env Tox, Cat 1
H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1
H412: Harmful to aquatic life with long lasting effects; Chronic Env Tox, Cat 3

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Composition: Component Table information was modified.
Perkal Pty Ltd Trading as Statewide Oil (South Australia): Section 01: Supplier Mailing Address information was deleted.
Perkal Pty Ltd Trading as Statewide Oil (Western Australia): Section 01: Supplier Mailing Address information was deleted.
Section 01: Company Contact Methods information was modified.
Section 01: Company Mailing Address information was deleted.
Section 01: Company Mailing Address information was modified.
Section 11: Tox List Cited Table information was deleted.
Section 16: HCode Key information was modified.
Southern Cross Lubes (Victoria and Tasmania, New South Wales and Australian Capital Territory): Section 01: Supplier Mailing Address information was deleted.

DGN: 2006172DAU (553106)

Prepared by: Exxon Mobil Corporation
EMBSI, Clinton NJ USA
Contact Point: See Section 1 for Local Contact number

End of (M)SDS

SAFETY DATA SHEET

1. Identification

Product identifier **NAPA® Clean-R-Carb™ Carburetor Cleaner (50 State Formula)**

Other means of identification

Product Code No. 091345 (Item# 1007990)

Recommended use Carburetor 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	Flammable aerosols	Category 1
	Gases under pressure	Compressed gas
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
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. Toxic 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. 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. Avoid breathing mist or vapor. Wash thoroughly after handling. Wear eye protection/face protection. Wear protective gloves. 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 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. 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)	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.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
acetone		67-64-1	80 - 90
carbon dioxide		124-38-9	5 - 10
n-heptane		142-82-5	3 - 5
3-methylhexane		589-34-4	1 - 3
2-methylhexane		591-76-4	< 1
3-ethylpentane		617-78-7	< 0.3
3,3-dimethylpentane		562-49-2	< 0.2

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. Rinse skin with water/shower. 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	Water fog. Alcohol resistant 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.
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 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. 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 entry into waterways, sewer, basements or confined areas. 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

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 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. 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 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
n-heptane (CAS 142-82-5)	PEL	2000 mg/m3 500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-methylhexane (CAS 591-76-4)	STEL	500 ppm
	TWA	400 ppm
3,3-dimethylpentane (CAS 562-49-2)	STEL	500 ppm
	TWA	400 ppm
3-ethylpentane (CAS 617-78-7)	STEL	500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
	TWA	400 ppm
3-methylhexane (CAS 589-34-4)	STEL	500 ppm
	TWA	400 ppm
acetone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 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
	TWA	9000 mg/m3
		5000 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. 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. Polyvinyl alcohol (PVA). 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 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 Colorless.

Odor Solvent.

Odor threshold Not available.

pH	Not available.
Melting point/freezing point	-138.5 °F (-94.7 °C) estimated
Initial boiling point and boiling range	132.9 °F (56.1 °C) estimated
Flash point	< 0 °F (< -17.8 °C) Tag Closed Cup
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.1 % estimated
Flammability limit - upper (%)	12.8 % estimated
Vapor pressure	5061 hPa estimated
Vapor density	> 2 (air = 1)
Relative density	0.84 estimated
Solubility (water)	Slightly soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	539.6 °F (282 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	91.4 % 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. Strong acids. Strong bases. Aldehydes. Alkalies. Amines. Ammonia. Halogens. Peroxides.
Hazardous decomposition products	Carbon oxides.

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
3-methylhexane (CAS 589-34-4)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg

Components	Species	Test Results
Oral		
LD50	Rat	> 2000 mg/kg
acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20000 mg/kg
Oral		
LD50	Rat	5800 mg/kg
n-heptane (CAS 142-82-5)		
Acute		
Dermal		
LD50	Rabbit	3000 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 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. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.

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)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
n-heptane (CAS 142-82-5)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	1.5 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	2.1 - 2.98 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
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 of waste from residues / unused products This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. 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
F003: Waste Non-halogenated Solvent - Spent Non-halogenated Solvent

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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

3,3-dimethylpentane (CAS 562-49-2)	Listed.
acetone (CAS 67-64-1)	Listed.

CERCLA Hazardous Substances: Reportable quantity

3,3-dimethylpentane (CAS 562-49-2)	100 LBS
acetone (CAS 67-64-1)	5000 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

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

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

acetone (CAS 67-64-1)	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 - No
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)

US. New Jersey Worker and Community Right-to-Know Act

3-methylhexane (CAS 589-34-4)
acetone (CAS 67-64-1)
carbon dioxide (CAS 124-38-9)
n-heptane (CAS 142-82-5)

US. Massachusetts RTK - Substance List

2-methylhexane (CAS 591-76-4)
3-methylhexane (CAS 589-34-4)
acetone (CAS 67-64-1)
carbon dioxide (CAS 124-38-9)

n-heptane (CAS 142-82-5)

US. Pennsylvania Worker and Community Right-to-Know Law

3,3-dimethylpentane (CAS 562-49-2)
3-methylhexane (CAS 589-34-4)
acetone (CAS 67-64-1)
carbon dioxide (CAS 124-38-9)
n-heptane (CAS 142-82-5)

US. Rhode Island RTK

acetone (CAS 67-64-1)
carbon dioxide (CAS 124-38-9)
n-heptane (CAS 142-82-5)

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

acetaldehyde (CAS 75-07-0)	Listed: April 1, 1988
benzene (CAS 71-43-2)	Listed: February 27, 1987
cumene (CAS 98-82-8)	Listed: April 6, 2010
ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004
naphthalene (CAS 91-20-3)	Listed: April 19, 2002

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

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	9.2 %
Consumer products (40 CFR 59, Subpt. C)	Compliant

State

Consumer products	This product is regulated as a Carburetor Cleaner. This product is compliant for use in all 50 states.
VOC content (CA)	9.2 %
VOC content (OTC)	9.2 %

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)	Yes
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
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 02-28-2014

Revision date	10-04-2017
Prepared by	Allison Yoon
Version #	04
Further information	CRC # 920B/1002914
HMIS® ratings	Health: 2 Flammability: 4 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 2 Flammability: 4 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 Transport Information: Agency Name, Packaging Type, and Transport Mode Selection Other information, including date of preparation or last revision: Further information

SAFETY DATA SHEET

Revision Date 11-May-2020 **Version** 3

1. IDENTIFICATION

Product identifier
Product Name GASKET REMOVER 4 OZ.

Other means of identification
Product Code 80645

Recommended use of the chemical and restrictions on use
Recommended Use Adhesive Remover
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
ITW Permatex
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 not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Gases under pressure	Compressed gas

Label elements

Emergency Overview

Contains gas under pressure; may explode if heated

This product contains substances which at their given concentration, are considered to be hazardous to health

Appearance White	**Physical state** Viscous liquid	**Odor** Ester

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.

Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES

Description of first aid measures

General advice Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.

Eye contact IF IN EYES:. Wash with plenty of water.

Skin contact In case of contact with liquefied gas, thaw frosted parts with lukewarm water.

Inhalation Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult.

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

Note to physicians Keep victim warm and quiet.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing agent suitable for type of surrounding fire, Dry chemical or CO2, Water spray, fog or regular foam, Move containers from fire area if you can do it without risk, Damaged cylinders should be handled only by specialists

Unsuitable extinguishing media
None

Specific hazards arising from the chemical
Some may burn but none ignite readily. Ruptured cylinders may rocket.

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 Do not touch or walk through spilled material. Stop leak if you can do it without risk.

Other Information Ventilate the area.

Environmental precautions

Environmental precautions Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment If possible, turn leaking containers so that gas escapes rather than liquid. Allow substance to evaporate.

Methods for cleaning up Do not direct water at spill or source of leak.

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. Wash thoroughly after handling. Contents under pressure. Do not puncture or incinerate cans.

Conditions for safe storage, including any incompatibilities

Storage Conditions Protect from sunlight. Store in a well-ventilated place.

Incompatible materials Strong oxidizing agents, Acids, Alkalis

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .
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	None under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment.
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	Viscous liquid
Appearance	White
Odor	Ester
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	5.9-7.1	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	> 95 °C / > 203 °F	Pensky-Martens Closed Cup (PMCC)
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	1.07	
Water solubility	Soluble in water	
Solubility(ies)	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 (%)	28.55
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, Acids, Alkalis

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.

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)
Not classifiable as a human carcinogen

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	15889 mg/kg
ATEmix (dermal)	18537 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.01 % 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

14. TRANSPORT INFORMATION

DOT

UN/ID No	1950
Proper shipping name:	Aerosols, Limited Quantity (LQ)
Hazard Class	2.2
Special Provisions	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	2.2
EmS-No	F-D, S-U

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Not determined
IECSC	Complies
KECL	Not determined
PICCS	Complies
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 contains the following Proposition 65 chemicals
U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
NITROGEN 7727-37-9	X	X	X
2-PHENOXYETHANOL 122-99-6	X	-	X
TRIETHANOLAMINE 102-71-6	X	X	X

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**	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 11-May-2020

Disclaimer
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End of Safety Data Sheet

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : NAPA® EP WHEEL BEARING GREASE

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet	**Emergency telephone number** 1-800-VALVOLINE
Valvoline LLC 3499 Blazer Parkway Lexington, KY 40509 United States of America SDS@valvoline.com	**Regulatory Information Number** 1-800-TEAMVAL **Product Information** 1-800-TEAMVAL

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS Label element

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	Asp. Tox. 1; H304	74.99

ASPHALT	8052-42-4	Not a hazardous substance or mixture.	24.99
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA	64742-52-5	Not a hazardous substance or mixture.	9.99

SECTION 4. FIRST AID MEASURES

General advice	:	No hazards which require special first aid measures.
If inhaled	:	If breathed in, move person into fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	:	Remove contact lenses. Protect unharmed eye.
If swallowed	:	Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways)
Notes to physician	:	No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2) Dry chemical
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	carbon dioxide and carbon monoxide sulfur oxides Hydrocarbons Aldehydes Ketones Nitrogen oxides (NOx) Sulphur oxides
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Standard procedure for chemical fires.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so.
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.
Other information	:	Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Smoking, eating and drinking should be prohibited in the

application area.
For personal protection see section 8.

Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS
		TWA	5 mg/m3 Mist.	Z1A
		TWA	400 ppm 1,600 mg/m3	Z1A
ASPHALT	8052-42-4	TWA	0.5 mg/m3 Inhalable fraction. (as benzene solubles)	ACGIH
		Ceil_Time	5 mg/m3 Fume.	NIOSH/GUIDE
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA	64742-52-5	PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known,

suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required.
Eye protection	:	Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
Skin and body protection	:	Wear as appropriate: Safety shoes Wear resistant gloves (consult your safety equipment supplier).
Hygiene measures	:	General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	gel
Physical state	:	liquid
Colour	:	red
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
	:	640 °F / 338 °C
Flash point	:	471 °F / 244 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	< 0.01 mmHg (20 °C)
Relative vapour density	:	No data available

Relative density	:	0.95 (15.6 °C)
Density	:	0.90 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	negligible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	> 315 °C
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm2/s (40 °C)
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products		carbon dioxide and carbon monoxide Hydrocarbons Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation Skin contact Eye Contact

Ingestion

Acute toxicity
Not classified based on available information.
Product:
Acute oral toxicity : Acute toxicity estimate (Rat): 3,019 mg/kg

Acute dermal toxicity : Acute toxicity estimate (Rabbit): 169,492 mg/kg

Components:
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC**:**
Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 5,000 mg/kg

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA**:**
Acute oral toxicity : LD 50 (Rat): > 5 g/kg

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: Not classified as acutely toxic by inhalation under GHS.

Acute dermal toxicity : LD 50 (Rabbit): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by dermal absorption under GHS.
Remarks: No mortality observed at this dose.

Skin corrosion/irritation
Not classified based on available information.
Product:
Result: Not irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

Components:
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC**:**
Result: Mildly irritating to skin

ASPHALT**:**
Result: Not irritating to skin

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA**:**
Species: Rabbit
Result: Not irritating to skin

Serious eye damage/eye irritation
Not classified based on available information.
Product:

Result: Not irritating to eyes

Remarks: Unlikely to cause eye irritation or injury.

Components:
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC**:**
Result: Mildly irritating to eyes

ASPHALT**:**
Result: Possibly irritating to eyes

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA**:**
Species: Rabbit
Result: Mildly irritating to eyes

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.
Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA**:**
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Germ cell mutagenicity
Not classified based on available information.
Carcinogenicity
Not classified based on available information.
Reproductive toxicity
Not classified based on available information.
STOT - single exposure
Not classified based on available information.
STOT - repeated exposure
Not classified based on available information.
Aspiration toxicity
Not classified based on available information.
Product:
No aspiration toxicity classification

Components:
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC**:**
May be fatal if swallowed and enters airways.

Further information
Product:
Remarks: No data available

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans	
	ASPHALT	8052-42-4

OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA**:**

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 202
Toxicity to algae	:	NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEL (Daphnia (water flea)): 10 mg/l Exposure time: 21 d Test Type: semi-static test Test substance: WAF Method: OECD Test Guideline 211

Persistence and degradability

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA**:**

Biodegradability	:	Result: Inherently biodegradable Biodegradation: 31 % Exposure time: 28 d Method: OECD Test Guideline 301F

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant		no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : No SARA Hazards

SARA 313
Component(s)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 Proposition 65 warnings are not required for this product based on the results of a risk assessment.

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

AUSTR : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL.

ENCS : On the inventory, or in compliance with the inventory

KECL : On the inventory, or in compliance with the inventory

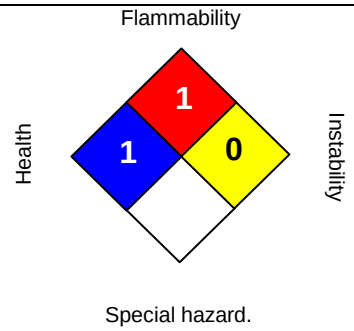
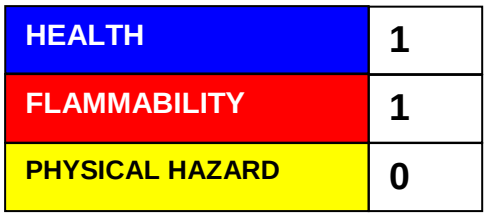
PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information
Revision Date: 07/31/2016

NFPA:	HMIS III:
	 0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements referred to under sections 2 and 3.
H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-825-8654).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :
ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

SAFETY DATA SHEET

Prepared to U.S. OSHA, Canadian WHMIS Standards, and the Global Harmonization Standard

DATE OF PREPARATION: September 8, 2000
DATE OF REVISION: October 21, 2020

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

IDENTIFICATION of the SUBSTANCE or PREPARATION:

TRADE NAME: **NOVUS PLASTIC POLISH #1** (Plastic Clean & Shine, NOVUS No 1)

PRODUCT CODES: 7012, 7020, 7023, 7024, 7026, 7050, 7052, 7299, 7302

RELEVANT USES of the SUBSTANCE: Clean and Restore Plastic Surfaces

USES ADVISED AGAINST: Other than Relevant Use, Including Glass Polishing

COMPANY/UNDERTAKING IDENTIFICATION:

U.S. DISTRIBUTOR'S NAME: **NOVUS 2 LLC**

ADDRESS: 650 Pelham Boulevard, Suite 100
St Paul, MN 55114

CANADIAN DISTRIBUTOR'S NAME: **FIX AUTO**

ADDRESS: 99 Émilien-Marcoux Suite 101
Blainville, Québec J7C 0B4, Canada

EMERGENCY PHONE (medical): 1-800-420-8036 [24-hrs]

EMAIL ADDRESS FOR SDS INFORMATION: msds-info@novusglass.com

2. HAZARD IDENTIFICATION

This product has been classified under OSHA's Hazard Communication Standard (29CFR §1910.1200), and Canadian WHMIS (HPR). This is a self-classification.

GHS CLASSIFICATION:

None

GHS LABEL ELEMENTS:

Signal Word: None

Hazard Statements: None

Precautionary Statements:

Prevention: None

Response: None

Storage: None

Disposal: None

Hazard Symbols/Pictograms: None

3. COMPOSITION and INFORMATION ON INGREDIENTS

SUBSTANCE or MIXTURE: Mixture
CHEMICAL NAME/CLASS: Organic Liquid/Polymer/Water Mixture

CHEMICAL NAME	CAS #	% w/w	**GHS Classification Hazard Statements/Pictograms**
Isopropyl Alcohol	67-63-0	≤ 0.5%	Classification: Flam Liq Cat. 2, Eye Irr Cat. 2A, STOT SE 3 Hazard Statement Codes: H225, H319, H336 Hazard Symbols/Pictograms: GHS02, GHS07
Polydimethylsiloxane, Silanol Terminated	70131-67-8	< 5.0%	Classification: Not Applicable
Dimethylpolysiloxane	63148-62-9	< 2.0%	Classification: Not Applicable

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES: Contaminated individuals must be taken for medical attention if any adverse effects occur. Take a copy of label and SDS to health professional with victim.

SKIN EXPOSURE: If this material contaminates the skin, begin decontamination with running water. Recommended flushing is for 15 minutes if any sign of skin irritation develops. Contaminated individual should seek immediate medical attention if any adverse exposure symptoms develop.

EYE EXPOSURE: If this product enters the eyes, open contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have contaminated individual "roll" eyes. Minimum flushing is for 20 minutes. Contaminated individual must seek medical attention if adverse effect continues after flushing.

INHALATION: If this product is inhaled, remove contaminated individual to fresh air. Contaminated individual must seek medical attention if adverse effects occur.

INGESTION: If this material 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 unable to swallow. If victim is convulsing, maintain an open airway and obtain immediate medical attention.

MOST IMPORTANT SYMPTOMS/EFFECTS (ACUTE AND CHRONIC): See Sections 2 (Hazard Identification) and 11 (Toxicological Information) for description of possible health effects from exposure to this product.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Dermatitis and other pre-existing skin disorders may be aggravated by prolonged overexposure to this product.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FIRE EXTINGUISHING MEDIA: Use extinguishing material suitable to the surrounding fire, including halon, carbon dioxide, dry chemical and ABC class.

UNSUITABLE FIRE EXTINGUISHING MEDIA: None known.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE: When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (e.g., oxides of silicon and carbon).

Explosion Sensitivity to Mechanical Impact: Not applicable.
Explosion Sensitivity to Static Discharge: Not applicable.

SPECIAL PROTECTIVE ACTIONS FOR FIREFIGHTERS: Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES: Proper protective equipment should be used. In the event of a spill, clear the area and protect people. Eliminate all sources of ignition before cleanup begins. Use non-sparking tools. The atmosphere must have levels of components lower than those listed in Section 8, (Exposure Controls and Personal Protective Equipment) if applicable, and have at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).

PERSONAL PROTECTIVE EQUIPMENT: Use proper protective equipment and non-sparking tools and equipment.

Small Spills: Wear rubber gloves, splash goggles, and appropriate body protection.

METHODS FOR CLEAN-UP AND CONTAINMENT: Avoid allowing contact with water on spilled substance or inside containers.

Small Spills: Absorb spilled material with polypads or other suitable, non-reacting sorbent, avoiding generation of aerosols, wearing gloves, goggles and apron. Place spilled material in appropriate container for disposal, sealing tightly. Remove all residue before decontamination of spill area.

Large Spills: Access to the spill area should be restricted. Spread should be limited by diking spill area. Absorb spilled liquid with polypads or other suitable absorbent materials.

All Spills: Place all spill residue in a double plastic bag or other containment and seal. Decontaminate the area thoroughly. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). For spills on water, contain, minimize dispersion and collect. Dispose of recovered material and report spill per regulatory requirements.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Run-off water may be contaminated by other materials and should be contained to prevent possible environmental damage.

REFERENCE TO OTHER SECTIONS: See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

7. HANDLING and STORAGE

TECHNICAL MEASURES:

See Ventilation and Engineering Controls in Section 8.

PRECAUTIONS FOR SAFE HANDLING:

All employees who handle this material should be trained to handle it safely. Keep container tightly closed when not in use. As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

CONDITIONS FOR SAFE STORAGE:

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored away from incompatible materials (See Section 10.) Material should be stored in secondary containers or in a diked area, as appropriate. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Storage areas should be made of fire resistant materials. Have appropriate extinguishing equipment in the storage area (such as sprinkler systems or portable fire extinguishers). Empty containers may contain residual product; therefore, empty containers should be handled with care.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS:

OCCUPATIONAL/WORKPLACE EXPOSURE LIMITS/GUIDELINES:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVS		US OSHA-PELS		NIOSH-RELS		NIOSH	OTHER
		TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3	mg/m^3
Isopropyl Alcohol	67-63-0	200	400	400	500 (vacated 1989 PEL)	400	500	2000 (based on 10% of LEL)	Canada (ON, AB, SK) OEL TWA= 200ppm, STEL = 400ppm Canada (QB, YK) OEL TWA/EV = 400ppm, STEL/V = 500ppm
Dimethylpolysiloxane	63148-62-9	NE	NE	NE	NE	NE	NE	NE	NE
Polydimethylsiloxane, Silanol Terminated	70131-67-8	NE	NE	NE	NE	NE	NE	NE	NE

NE = Not Established. See Section 16 for definitions.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION, Continued

CONTROL PARAMETERS:

BIOLOGICAL EXPOSURE INDICES: Currently, there are ACGIH Biological Exposure Indices (BEIs) determined for the components of this product, as follows:

CHEMICAL: DETERMINANT	SAMPLING TIME	BEI
Isopropanol • Acetone in urine	• End of Shift End of Workweek	• 40 mg/L

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Use a mechanical fan or vent area to outside. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits provided in this section, if applicable. Use a non-sparking, grounded, explosion-proof ventilation system separate from other exhaust ventilation systems. Exhaust system in manner consistent with prevention of release to atmosphere. An eyewash and safety shower should be readily accessible.

ENVIRONMENTAL EXPOSURE CONTROLS: Refer to Sections 6, 7 and 13 for information on controlling exposure to this product to the environment.

PROTECTIVE EQUIPMENT: 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, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hard Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR1910.132), or equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, *Industrial Eye and Face Protectors* and CSA Standard Z195-02, *Protective Footwear*). Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain the Oxygen level above 19.5% in the workplace and exposure limits below levels given earlier in this section, if applicable. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard. If necessary, use only respiratory protection authorized in appropriate regulations to assist in assist in equipment selection.

EYE PROTECTION: Use approved safety goggles or safety glasses. If necessary, refer to appropriate regulations to assist in equipment selection.

HAND PROTECTION: Wear butyl rubber, Teflon™, Barricade™, Chemrel™, nitrile or similar gloves for routine industrial use. If necessary, refer to applicable regulations and standards.

BODY PROTECTION: Use body protection appropriate for task. If necessary, refer to appropriate regulations to assist in equipment selection.

HYGIENE: See Section 7.

9. PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE: Thin liquid.

COLOR: Translucent, milky.

MOLECULAR FORMULA: Mixture.

MOLECULAR WEIGHT: Mixture.

ODOR: Faint.

ODOR THRESHOLD: Not established.

pH: Not established.

MELTING/FREEZING POINT: Not established.

BOILING POINT: Not established.

9. PHYSICAL and CHEMICAL PROPERTIES, continued

FLASH POINT (Pensky-Martens Closed Tester): >93.3°C (200°F).

EVAPORATION RATE (nBuAc = 1): Not established; based on ingredients the comparative evaporation rate is expected to be <1.

FLAMMABLE LIMITS (in air by volume, %): Not established.

VAPOR PRESSURE, mm Hg @ 50°C: Not established.

RELATIVE VAPOR DENSITY (air = 1): Not established; based on ingredients the relative vapor density is expected to be >1.

SPECIFIC GRAVITY (23°C, water = 1): 1.01

SOLUBILITY: Soluble in water.

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not established.

AUTOIGNITION TEMPERATURE: Not established.

VISCOSITY (cP): Not established.

VOLATILE ORGANIC COMPOUND CONTENT: 4.32g/L

10. STABILITY and REACTIVITY

REACTIVITY: Not considered a reactivity hazard.

CHEMICAL STABILITY: Stable under typical, environmental conditions in a workplace in the absence of contaminates.

DECOMPOSITION PRODUCTS: *Combustion:* Silicon, nitrogen and carbon oxides. *Hydrolysis:* None known.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizers, water-reactive materials.

POSSIBILITY OF HAZARDOUS REACTIONS: None known.

CONDITIONS TO AVOID: Exposure to incompatible chemicals, high temperatures.

11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY: Not Classified.

Data for Isopropyl Alcohol:
LD_{50} (Oral-Rat) 5045 mg/kg
LD_{50} (Skin-Rabbit) 12,800 mg/kg
LDLo (unreported, man) = 2770 mg/kg
TDLo (oral, man) = 14,432 mg/kg; Behavioral: coma; Vascular: BP lowering not characterized in autonomic section; Lungs, Thorax, or Respiration: dyspnea
TDLo (oral, human) = 223 mg/kg; Behavioral: hallucinations, distorted perceptions; Cardiac: pulse rate; Vascular: BP lowering not characterized in autonomic section TDLo (oral, infant) = 13 gm/kg; Behavioral: somnolence (general depressed activity), irritability; Gastrointestinal: nausea or vomiting
LDLo (oral, man) = 5272 mg/kg; Behavioral: coma; Vascular: BP lowering not characterized in autonomic section; Lungs, Thorax, or Respiration: chronic pulmonary edema
LDLo (oral, human) = 3570 mg/kg; Behavioral: coma; Lungs, Thorax, or Respiration: respiratory depression; Gastrointestinal: nausea or vomiting

SKIN CORROSION/IRRITATION: Not Classified.

Data for Isopropyl Alcohol:
Skin Irritancy (rabbit) = 500 mg; mild

11. TOXICOLOGICAL INFORMATION, continued

SERIOUS EYE DAMAGE/IRRITATION: Not Classified.

Data for Isopropyl Alcohol:
Eye Irritancy (rabbit) = 100 mg; severe
Eye Irritancy (rabbit) = 10 mg; moderate

RESPIRATORY or SKIN SENSITIZATION: Not Classified.

GERM CELL MUTAGENICITY: Not Classified.

CARCINOGENICITY: Not Classified.

ISOPROPYL ALCOHOL: ACGIH-TLV-A Compound (Not Classifiable as a Human Carcinogen); IARC-3 Compound (Not Classifiable as to Carcinogenicity to Humans)

REPRODUCTIVE TOXICITY: Not Classified.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): Not Classified.

Data for Isopropyl Alcohol:
TDLo (oral, rat) = 6480 mg/kg/male 26 weeks pre; Reproductive effects
TCLo (inhalation, rat) = 10,000 ppm/7 hours/female 1–19 days post; Teratogenic effects

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): Not Classified.

SYMPTOMS/EFFECTS AFTER INHALATION: Inhalation is not anticipated to be a significant route of exposure to this product. If mists or sprays of this product are inhaled, they may mildly irritate the nose and other tissues of the upper respiratory system. Symptoms are generally alleviated upon breathing fresh air.

SYMPTOMS/EFFECTS AFTER EYE OR SKIN CONTACT: Depending on the duration and concentration of exposure, eye contact may cause tearing and redness. Skin contact may cause mild redness, discomfort, and irritation. Symptoms are generally alleviated upon rinsing. Repeated skin contact may cause dermatitis (dry, red skin).

SYMPTOMS/EFFECTS AFTER INGESTION: Ingestion is not anticipated to be a likely route of exposure to this product. If this material is swallowed, it may cause headache, nausea, and vomiting.

SYMPTOMS/EFFECTS AFTER SKIN ABSORPTION: Although the Isopropyl Alcohol component of this product can be absorbed through intact skin, skin absorption is not anticipated to cause adverse effects.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ECOTOXICITY: This product has not been tested for ecotoxicity. Aquatic toxicity data for components of this product are provided as follows:

ISOPROPYL ALCOHOL:
Toxic (*Chlorella pyrenoidosa* algae) = 17,400 mg/L
NOEC (*Daphnia magna*) reproduction = 2,100 mg/L
NOEC (*Daphnia magna*) growth = 757 mg/L
EC_0 (*Pseudomonas putida*, bacteria) 16 hours = 1,050 mg/L
EC_0 (*Microcystis aeruginosa*, algae) 8 days = 1,000 mg/L
EC_0 (*Scenedesmus quadricauda*, green algae) 7 days = 1,800 mg/L
EC_{50} (*Daphnia magna*) reproduction = 3,010 mg/L
EC_0 (*Uronema parduczi* Chatton-Lwoff, protozoa) = 3,425 mg/L
LC_0 (*Semolitus atromaculatus*, creek chub) 24 hours = 900 mg/L

ISOPROPYL ALCOHOL (continued):
EC_{50} (*Entosiphon sulcatum*, protozoa) 72 hours = 4,930 mg/L
EC_{50} MicrotoxTM (*Photobacterium*) test 5 minutes = 22,800 mg/L
LC_{50} Streptoxkit F (*Streptocephalus proboscideus*) test 24 hours = 11,600 mg/L
LC_{50} (*Daphnia magna*) test 24 hours = 9500 mg/L
LC_{50} Rotoxkit F (*Brachionus calyciflorus*) test 24 hours = 28,600 mg/L
LC_{50} (*Crangon crangon*, brown shrimp) 48 hours = (average) 1,400 mg/L
LC_{50} (*Crangon crangon*, brown shrimp) 48 hours = (range) 900-1,950 mg/L

ISOPROPYL ALCOHOL (continued):
LC_{50} (*Crangon crangon*, brown shrimp) 98 hours = (average) 1,150 mg/L
LC_{50} (*Crangon crangon*, brown shrimp) 98 hours = (range) 750-1,650 mg/L
LC_{50} (*Daphnia magna*) = 4,600 mg/L
LC_{50} (*Crassus auratus*, goldfish) 24 hours = > 500 mg/L
LC_{50} (*Pimephales promelas*, fathead minnow) 1; 24; 48; 72 and 96 hours = 11,830; 11,160; 11,130; 11,130; 11,130 mg/L
LC_{50} (*Poecilia reticulata*, guppy) 7 days = 7,060 mg/L
LC_{100} (creek chub) 24 hours = 1,100 mg/L

12. ECOLOGICAL INFORMATION, continued

PERSISTENCE AND BIODEGRADABILITY: The product has not been tested for persistence or biodegradability. The components of this product are relatively stable under ambient environmental conditions. Additional environmental data for components of this product are available as follows:

DIMETHYLPOLYSILOXANE:

Water Solubility: Insoluble.

Terrestrial Fate: If released to soil, Dimethyl Siloxane will absorb strongly and will remain essentially immobile. Dimethyl Siloxane will not volatilize to the atmosphere, nor will it biodegrade. Dimethyl Siloxane will not undergo hydrolysis except in clay soils which are known to catalyze this reaction at a rate dependent upon the amount of water present.

Aquatic Fate: If released to an aquatic environment, Dimethyl Siloxane is expected to absorb strongly to sediment and suspended organic matter. Although insoluble in water, Dimethyl Siloxane is not expected to bioconcentrate, due to its inherent hydrophobicity. Dimethyl Siloxane will not bioconcentrate in fish and aquatic environments as this compound is molecularly too large to pass through biological membranes and concentrate in fatty tissue. Dimethyl Siloxane will hydrolyze in water and will not volatilize to the atmosphere.

Atmospheric Fate: If released to the atmosphere, Dimethyl Siloxane will only enter the atmosphere if in aerosol form, due to its heavy molecular weight, very low vapor pressure and liquid physical state. The most likely atmospheric fate process is by dry deposition to the surface of the earth.

ISOPROPYL ALCOHOL:

Octanol/Water Partition Coefficient: Log P = 0.34–0.5

Persistence: If released to the soil, Isopropanol will both rapidly evaporate and leach into the ground due to high vapor pressure and low adsorption to soil. If released to water, Isopropanol will volatilize, with an estimated half-life of 5.4 days. If released to the atmosphere, Isopropanol will photodegrade, with an estimated half-life of one to several days. Due to the solubility of Isopropanol in water, rainout may be significant.

Biodegradation: In soil, and water, degradation of Isopropanol has not been determined. If soil degradation is not rapid, it will likely leach to groundwater.

BIO-ACCUMULATION POTENTIAL: This product has not been tested for bio-accumulation potential.

MOBILITY: This product has not been tested for mobility in soil.

OTHER ADVERSE EFFECTS: No components of this product are listed as having ozone depletion potential.

ENVIRONMENTAL EXPOSURE CONTROLS: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

DISPOSAL CONTAINERS: Waste materials must be placed in and shipped in impermeable containers. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING: Wear proper protective equipment when handling waste materials.

U.S. EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION 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 considered as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION DESIGNATION: This material is NOT considered as dangerous goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO): This product is NOT considered as dangerous goods, per rules of the IMO.

TRANSPORT IN BULK ACCORDING TO THE IBC CODE: Not applicable.

ENVIRONMENTAL HAZARDS: This product does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN); components are not specifically listed in Annex III under MARPOL 73/78.

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Isopropyl Alcohol (mfg-strong acid process)	No	No	Yes

U.S. SARA THRESHOLD PLANNING QUANTITY: No Threshold Planning Quantities for this product. The default Federal SDS 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): There are no specific reportable quantities for this product or its components.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

STATE REGULATIONS:
CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this product is on the California Proposition 65 lists.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY: The components of this product are listed on the DSL Inventory.

CANADIAN ENVIRONMENTAL PROTECTION AGENCY (CEPA) PRIORITY SUBSTANCES LISTS: Not applicable.

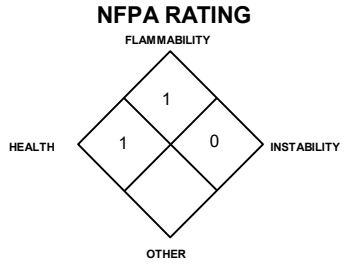
16. OTHER INFORMATION

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721 (800) 969-4846
NOVUS 2 LLC CHEMISTRY DEPARTMENT • 650 Pelham Boulevard, Suite 100 • St Paul, MN 55114 (952) 944-8000

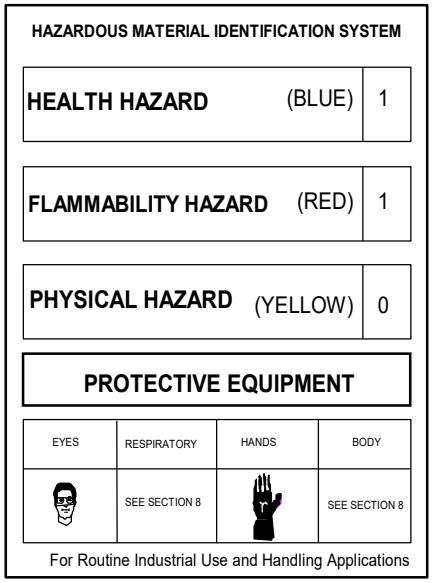
REFERENCES AND DATA SOURCES: Contact the supplier for information.

METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION: Bridging principles were used to classify this product.

REVISION DETAILS:
April 2012: Review and update entire SDS to comply with EU CLP 1272: 2008 and GHS.
October 2012: Review and update to comply with OSHA's revised Hazard Communication Standard.
October 2015: Review and update as necessary.
March 2017: Review and update to particulars of Canada's HPR.
July 2017: Review and update Canadian distributor, formatting.
August 2018: Added VOC Content information to Section 9.
April 2019: Updated company name; new formula
July 2020: Update Section 8
October 2020: Update Sections 2 and 11 with new hazard information.



Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate
3 = Serious **4** = Severe



Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate
3 = Serious **4** = Severe * = Chronic hazard

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

BEI - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.

IDLH-Immediately Dangerous to Life and Health: This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

LOQ: Limit of Quantitation.

MAK: Federal Republic of Germany Maximum Concentration Values in the workplace.

NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

NIC: Notice of Intended Change.

NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

NIOSH RELs: NIOSH's Recommended Exposure Limits.

PEL-Permissible Exposure Limit: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL that was vacated by Court Order.

SKIN: Used when a there is a danger of cutaneous absorption.

STEL-Short Term Exposure Limit: Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

STEV – Short Term Exposure Value.

TLV-Threshold Limit Value: An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

TWA-Time Weighted Average: **T**ime Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

TWAEV: Time Weighted Average Exposure Value.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS: This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

HEALTH HAZARD:

0 (Minimal Hazard: No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation*: Essentially non-irritating. PII or Draize = "0". *Eye Irritation*: Essentially non-irritating, or minimal effects which clear in < 24 hours [e.g. mechanical irritation]. Draize = "0". *Oral Toxicity LD_{50} Rat*: < 5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: < 2000 mg/kg. *Inhalation Toxicity 4-hrs LC_{50} Rat*: < 20 mg/L.); **1** (Slight Hazard: Minor reversible Injury may occur; slightly or mildly irritating. *Skin Irritation*: Slightly or mildly irritating. *Eye Irritation*: Slightly or mildly irritating. *Oral Toxicity LD_{50} Rat*: > 500-5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 1000-2000 mg/kg. *Inhalation Toxicity LC_{50}* 4-hrs *Rat*: > 2-20 mg/L); **2** (Moderate Hazard: Temporary or transitory injury may occur. *Skin Irritation*: Moderately irritating; primary irritant; sensitizer. PII or Draize > 0, < 5. *Eye Irritation*: Moderately to severely irritating and/or corrosive; reversible corneal opacity; corneal involvement or irritation clearing in 8-21 days. Draize > 0, ≤ 25. *Oral Toxicity LD_{50} Rat*: > 50-500 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 200-1000 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.5-2 mg/L.); **3** (Serious Hazard): Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation*: Severely irritating and/or corrosive; may destroy dermal tissue, cause skin burns, dermal necrosis.

3 (continued): PII or Draize > 5-8 with destruction of tissue. *Eye Irritation*: Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD_{50} Rat*: > 1-50 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 20-200 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.05-0.5 mg/L.); **4** (Severe Hazard: Life-threatening; major or permanent damage may result from single or repeated exposure. *Skin Irritation*: Not appropriate. Do not rate as a "4", based on skin irritation alone. *Eye Irritation*: Not appropriate. Do not rate as a "4", based on eye irritation alone. *Oral Toxicity LD_{50} Rat*: ≤ 1 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: ≤ 20 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: ≤ 0.05 mg/L).

FLAMMABILITY HAZARD:

0 (Minimal Hazard-Materials that will not burn in air when exposure to a temperature of 815.5°C [1500°F] for a period of 5 minutes.); **1** (Slight Hazard-Materials that must be pre-heated before ignition can occur. Material require considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur, Including: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C [200°F] (e.g. OSHA Class IIIB, or; Most ordinary combustible materials [e.g. wood, paper, etc.]; **2** (Moderate Hazard-Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres in air, Including: Liquids having a flash-point at or above 37.8°C [100°F]; Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp; Solids and semisolids that readily give off flammable vapors.); **3** (Serious Hazard- Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions, including: Liquids having a flash point below 22.8°C [73°F] and having a boiling point at or above 38°C [100°F] and below 37.8°C [100°F] [e.g. OSHA Class IB and IC]; Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air [e.g., dusts of combustible solids, mists or droplets of flammable liquids]; Materials that burn extremely rapidly, usually by reason of self-contained oxygen [e.g. dry nitrocellulose and many organic peroxides]); **4** (Severe Hazard-Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and which will burn readily, including: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C [73°F] and a boiling point below 37.8°C [100°F] [e.g. OSHA Class IA; Material that ignite spontaneously when exposed to air at a temperature of 54.4°C [130°F] or below [e.g. pyrophoric]).

PHYSICAL HAZARD:

0 (*Water Reactivity*: Materials that do not react with water. *Organic Peroxides*: Materials that are normally stable, even under fire conditions and will not react with water. *Explosives*: Substances that are Non-Explosive. Unstable *Compressed Gases*: No Rating. *Pyrophorics*: No Rating. *Oxidizers*: No "0" rating allowed. *Unstable Reactives*: Substances that will not polymerize, decompose, condense or self-react.); **1** (*Water Reactivity*: Materials that change or decompose upon exposure to moisture. *Organic Peroxides*: Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy. *Explosives*: Division 1.5 & 1.6 substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases*: Pressure below OSHA definition. *Pyrophorics*: No Rating. *Oxidizers*: Packaging Group III; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives*: Substances that may decompose, condense or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosive hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors.); **2** (*Water Reactivity*: Materials that may react violently with water. *Organic Peroxides*: Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives*: Division 1.4 – Explosive substances where the explosive effect is largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases*: Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group II Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Unstable Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature); **3** (*Water Reactivity*: Materials that may form explosive reactions with water. *Organic Peroxides*: Materials that are capable of detonation or explosive reaction, but require a strong initiating source, or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives*: Division 1.2 – Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases*: Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group I Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3.:2 potassium bromate/cellulose mixture. *Oxidizers*: Liquids: Any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives*: Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a moderate potential to cause significant heat generation or explosion.); **4** (*Water Reactivity*: Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides*: Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives*: Division 1.1 & 1.2-explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases*: No Rating. *Pyrophorics*: Add to the definition of Flammability "4". *Oxidizers*: No "4" rating. *Unstable Reactives*: Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a high potential to cause significant heat generation or explosion).

DEFINITIONS OF TERMS (Continued)

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

HEALTH HAZARD: **0** (materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 10,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 200 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 2000 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 2000 mg/kg. Materials that are essentially non-irritating to the respiratory tract, eyes and skin. **1** (materials that, under emergency conditions, can cause significant irritation): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 10 mg/L but less than or equal to 200 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 500 mg/kg but less than or equal to 2000 mg/kg. Materials that cause slight to moderate irritation to the respiratory tract, eyes and skin. **2** (materials that, under emergency conditions, can cause temporary incapacitation or residual injury): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 3,000 ppm but less than or equal to 5,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 2 mg/L but less than or equal to 10 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 200 mg/kg but less than or equal to 1000 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. **3** (materials that, under emergency conditions, can cause serious or permanent injury): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 1,000 ppm but less than or equal to 3,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 5 mg/kg but less than or equal to 50 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials that are respiratory irritants. Cryogenic gases that cause frostbite and irreversible tissue damage. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials that are corrosive to the skin. **4** (materials that, under emergency conditions, can be lethal): Gases and vapors whose LC_{50} for acute inhalation toxicity less than or equal to 1,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD_{50} for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD_{50} for acute oral toxicity is less than or equal to 5 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 1000 ppm. **4** (materials that, under emergency conditions, can be lethal): Gases and vapors whose LC_{50} for acute inhalation toxicity less than or equal to 1,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD_{50} for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD_{50} for acute oral toxicity is less than or equal to 5 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 1000 ppm.

FLAMMABILITY HAZARD: **0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand: Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur: Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D. Liquids, solids and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the UN *Recommendation on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85 percent by weight. Liquids that have no fire point when tested by ASTM D 92 Standard Test Method for Flash and Fire Points by Cleveland Open Cup, up to a boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed up flash point of the solvent. Most ordinary combustible materials. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air: Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures in air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that, on account of their physical form or environmental conditions, can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with a representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily: Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air, Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

INSTABILITY HAZARD: **0** Materials that in themselves are normally stable, even under fire conditions: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the **N**ational **F**ire **P**rotection **A**ssociation (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used.

Other Information: BEI - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

DEFINITIONS OF TERMS (Continued)

ECOLOGICAL INFORMATION:

EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. **TL_m** = median threshold limit; Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S. and CANADA: ACGIH: American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Superfund Amendments and Reauthorization Act **(SARA)**; the Canadian Domestic/Non-Domestic Substances List **(DSL/NDSL)**; the U.S. Toxic Substance Control Act **(TSCA)**; Marine Pollutant status according to the **DOT**; the Comprehensive Environmental Response, Compensation, and Liability Act **(CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the material's package label. **OSHA** - U.S. Occupational Safety and Health Administration.

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Name	Phone Number			CHEMTREC
Nu-Calgon Wholesaler, Inc.	(314) 469-7000 / (800) 554-5499			(800) 424-9300
Street Address	**City**	**State**	**Postal Code**	**Last Update**
2008 Altom Court	St. Louis	MO	63146-4151	10/25/12
Product Name	**Product Number**	**Product Use**		**EPA Registration #**
Nu-blast, Aerosol	4290-75	Condenser Coil Cleaner		N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Trichloroethylene	90 - 98	79-01-6	50 ppm	50 ppm
Carbon dioxide	< 5	124-38-9	5000 ppm	5000 ppm

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Warning. Ensure adequate ventilation. Avoid breathing vapors or mists. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122ºF (50°C). Do not pierce or burn, even after use. Do not spray on naked flame or any incandescent material KEEP OUT OF REACH OF CHILDREN

Potential Health Effects

Eyes: Irritating to eyes.

Skin: Irritating to skin. Prolonged skin contact may defat the skin and produce dermatitis.

Ingestion: Aspiration may cause pulmonary oedema and pneumonitis. nausea.

Inhalation: Inhalation of high vapour concentrations may cause nasal & respiratory irritation and symptoms like headache, dizziness, tiredness, nausea, vomiting and possible unconsciousness.

Chronic Exposure: Prolonged exposure may cause chronic effects such as. Liver disorders. Kidney disorders. Lung damage. cardiac irregularities. Repeated and prolonged exposure to solvents may cause brain and nervous system damage. May cause disorder and damage to the spleen. In chronic inhalation tests with rats and mice, Trichloroethylene caused an increased incidence of tumours of a type which is routinely observed in these species.

Carcinogenicity: CA Prop 65 carcinogen - Trichloroethylene

Medical Conditions Aggravated be Exposure: May aggravate existing eye, skin, or upper respiratory conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist

Skin: Wash off with soap and water. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician

Ingestion: DO NOT INDUCE VOMITING. Aspiration hazard. Clean mouth with water and afterwards drink plenty of water. Immediate medical attention is required

Inhalation: Move to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth. Obtain medical attention

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: No Data.°F

Autoignition Temp: No Data.°C/No Data.°F

Hazardous Products of Combustion: Carbon oxides , Hydrogen chloride (trace amounts), Phosgene (trace amounts) or Chlorine (trace amounts).

Flammable Limits in Air: No Data.

Extinguishing Media: Foamy spray. Dry chemical. Carbon dioxide (CO2).

Fire and Explosion Hazards: Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122ºF (50°C).

Special Firefighting Procedures: 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

Spill or Leak: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container . Dispose of in accordance with local regulations.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Wear personal protective equipment. Do not pierce or burn, even after use. Do not spray on naked flame or any incandescent material.

Storage Requirements: KEEP OUT OF REACH OF CHILDREN. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122ºF (50°C).

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Eye Protection: Safety glasses with side-shields.

Protective Clothing: Neoprene gloves

Exposure Guidelines: See Section 2

Specific Engineering Controls (such as ventilation, enclosed process): Ensure adequate ventilation, especially in confined areas

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Aerosol	**Freezing Point:** No Data.°C/No Data.°F	**% Volatile by Weight:** 96.5 %
Color: Clear	**Vapor Density [air =1]:** No Data.	**Evaporation Rate:** 2.1 (concentrate only) (n-butyl acetate = 1)
Odor: Ethereal	**Vapor Pressure:** PSIG @ 70ºF (Aerosols): 85-100.	**Specific Gravity:** 1.45
Boiling Point: No Data.°C/No Data.°F	**Solubility in Water:** Insoluble.	**pH (concentrate):** No Data.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable

Hazardous Polymerization: Hazardous polymerization does not occur

Incompatibilities: Reactive metals. Magnesium. Strong oxidizing agents. Product may react with aluminum if immersed in liquid concentrate trichloroethylene for extended periods.

Reactive Conditions to avoid: Heat, flames and sparks. Extremes of temperature and direct sunlight. Do not expose to temperatures above 54°C .

Decomposition Products: Carbon oxides , Hydrogen chloride (trace amounts), Phosgene (trace amounts) or Chlorine (trace amounts)

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
Trichloroethylene	79-01-6	N/D	Oral LD50 Rat: 5650 mg/kg; Dermal LD50 Rabbit: >20 g/kg	Inhalation LC50 Mouse: 8450 ppm/4H;
Carbon dioxide	124-38-9	N/D	No Data.	No Data.

SECTION 12 – ECOLOGICAL INFORMATION

Hazardous Ingredients	Aquatic Toxicity Data
Trichloroethylene	96 Hr LC50 fathead minnow: 44.1 mg/L (flow-through)
Carbon dioxide	No Data.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Should not be released into the environment. Dispose of in accordance with local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

Purview	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT (Land)	Consumer Commodity ORM-D	No Data.	No Data.	No Data.
IMO (Water)	No Data.	No Data.	No Data.	No Data.
ICAO (Air)	Aerosols, Non-Flammable	UN1950	No Data.	2.2

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	D1B, D2A, D2B
SARA Title III: (Superfund Amendments & Reauthorization Act)	Yes - Trichloroethylene
OSHA: (Occupational Safety & Health Administration)	See Section 2
TSCA: (Toxic Substance Control Act)	Present
VOC: (volatile Organic Compounds)	96.5 %
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	Present
CERCLA: (Comprehensive Response Compensation & Liability Act)	Trichloroethylene - 100 lb RQ
IDL: (Canadian Ingredient Disclosure List)	No Data.
NFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health=2; Fire=0; Reactivity=0 Personal protective equipment = B

SECTION 16 – OTHER INFORMATION

No Data.

SAFETY DATA SHEET

Revision Date 26-Jan-2015 **Version** 1

1. IDENTIFICATION

Product identifier
Product Name 3H AVIATION FORM-A-GASKET #3 SEALANT .25PT

Other means of identification
Product Code 80019
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
10 Columbus Blvd.
Hartford, CT 06106 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

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 3
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger

Toxic if swallowed
May cause an allergic skin reaction
May cause cancer
Highly flammable liquid and vapor

Appearance Dark brown **Physical state** Liquid **Odor** Alcohol

Precautionary Statements - Prevention
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
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
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

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep cool

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

Unknown acute toxicity 54.89515% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No	Weight-%	Trade Secret
VEGETABLE OIL	68187-84-8	15 - 40	*
ROSIN	8050-09-7	10 - 30	*
TALC	14807-96-6	10 - 30	*

ETHANOL	64-17-5	10 - 30	*
2-PROPANOL	67-63-0	1 - 5	*
METHYL ISOBUTYL KETONE	108-10-1	0.1 - 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 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 (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs:. 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 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
Highly flammable.

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 Remove all sources of ignition. 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.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ROSIN 8050-09-7	-	(vacated) TWA: 0.1 mg/m³ Formaldehyde	TWA: 0.1 mg/m³ Formaldehyde
TALC 14807-96-6	TWA: 2 mg/m³ particulate matter containing no asbestos and <1% crystalline silica, respirable fraction	(vacated) TWA: 2 mg/m³ respirable dust <1% Crystalline silica, containing no Asbestos TWA: 20 mppcf if 1% Quartz or more, use Quartz limit	IDLH: 1000 mg/m³ TWA: 2 mg/m³ containing no Asbestos and <1% Quartz respirable dust
ETHANOL 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m³
2-PROPANOL 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³
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

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 gloves and protective clothing.

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	Dark brown
Odor	Alcohol
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	82 °C / 180 °F	
Flash point	16 °C / 61 °F	
Evaporation rate	7.7	Ether = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	12%	
Lower flammability limit:	2.0	
Vapor pressure	33 mm Hg	
Vapor density	2.07	Air = 1
Relative density	1.090-1.114	
Water solubility	Partially soluble	
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 (%)	19.4%
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
Heat, flames and sparks.

Incompatible materials
Strong oxidizing agents

Hazardous Decomposition Products
Carbon oxides, Aldehydes, Carboxylic acids

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 Toxic if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
ROSIN 8050-09-7	= 3 mg/kg (Rat) = 7600 mg/kg (Rat)	> 2500 mg/kg (Rabbit)	= 1.5 mg/L (Rat) 4 h
ETHANOL 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
2-PROPANOL 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m^3 (Rat) 4 h
METHYL ISOBUTYL KETONE 108-10-1	= 2080 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	= 8.2 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
TALC 14807-96-6	-	Group 3	-	-
ETHANOL 64-17-5	A3	Group 1	Known	X
2-PROPANOL 67-63-0	-	Group 1	-	X
METHYL ISOBUTYL KETONE 108-10-1	A3	Group 2B	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2B - Possibly 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

Chronic toxicity May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Contains a known or suspected reproductive toxin.

Target Organ Effects Blood, Central nervous system, Central Vascular System (CVS), Eyes, Liver, Reproductive System, Respiratory system, Skin, Thyroid.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 6 mg/kg
ATEmix (dermal) 3537 mg/kg
ATEmix (inhalation-dust/mist) 23.6 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

37.08865% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
ROSIN 8050-09-7	400: 72 h Desmodesmus subspicatus mg/L EC50	-	3.8 - 5.4: 48 h Daphnia magna mg/L EC50
TALC 14807-96-6	-	100: 96 h Brachydanio rerio g/L LC50 semi-static	-
ETHANOL 64-17-5	-	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50
2-PROPANOL 67-63-0	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50	13299: 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

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical Name	Partition coefficient
ETHANOL 64-17-5	-0.32
2-PROPANOL 67-63-0	0.05
METHYL ISOBUTYL KETONE 108-10-1	1.19

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

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
METHYL ISOBUTYL KETONE 108-10-1	-	Included in waste stream: F039	-	U161

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
ETHANOL 64-17-5	Toxic Ignitable
2-PROPANOL 67-63-0	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no 1866
Proper shipping name: Resin, solution, Limited Quantity (LQ)
Hazard Class 3
Packing Group II
Emergency Response Guide Number 127

IATA

UN/ID no ID 8000
Proper shipping name: Consumer commodity
Hazard Class 9
ERG Code 9L

IMDG

UN/ID no 1866
Proper shipping name: Resin, solution, Limited Quantity (LQ)
Hazard Class 3
Packing Group II
EmS-No F-E, S-E

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Does not comply
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 %
2-PROPANOL - 67-63-0	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 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)
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
ETHANOL - 64-17-5	Carcinogen Developmental
METHANOL - 67-56-1	Developmental
METHYL ISOBUTYL KETONE - 108-10-1	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
TALC 14807-96-6	X	X	X
ETHANOL 64-17-5	X	X	X
WATER 7732-18-5	-	-	X
2-PROPANOL 67-63-0	X	X	X
METHANOL 67-56-1	X	X	X
METHYL ISOBUTYL KETONE 108-10-1	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

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 26-Jan-2015

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

Revision Date 08-Jun-2021 **Version** 12

1. IDENTIFICATION

Product identifier
Product Name 2BR FORM A GASKET #2 SEALANT 3OZ

Other means of identification
Product Code 80016

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, 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)

Carcinogenicity	Category 1A

Label elements

Emergency Overview

Signal word
Danger

May cause cancer

Appearance Black	**Physical state** Paste / Gel Liquid	**Odor** Alcohol

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

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
Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

Unknown acute toxicity 2.14 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
KAOLIN	1332-58-7	30 - 60
FUMARATED RESIN	65997-04-8	10 - 30
ETHANOL	64-17-5	5 - 10
2-PROPANOL	67-63-0	1 - 5
CRYSTALLINE SILICA	14808-60-7	1 - 5
TITANIUM DIOXIDE	13463-67-7	0.1 - 1
CARBON BLACK	1333-86-4	0.1 - 1
METHYL ISOBUTYL KETONE	108-10-1	0.1 - 1

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 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 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 Store in a well-ventilated place. Keep cool.

Incompatible materials Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
KAOLIN 1332-58-7	TWA: 2 mg/m³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	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
ETHANOL 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m³
2-PROPANOL 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³
CRYSTALLINE SILICA 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/m ³ TWA respirable fraction	IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust
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
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
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

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

9.1. Information on basic physical and chemical properties

Physical state	Paste / Gel Liquid
Appearance	Black
Odor	Alcohol
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	82 °C / 179.6 °F	
Flash point	No information available °C / °F	ASTM D 4359
Evaporation rate	7.7	Ether = 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	33 mm Hg @ 68°F	
Vapor density	2.0	Air = 1
Relative density	1.5	
Water solubility	Partially soluble	
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
VOC content	11%
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
Aldehydes
Carboxylic acids

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. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
KAOLIN 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
FUMARATED RESIN 65997-04-8	> 2000 mg/kg (Rat)	-	-
ETHANOL 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
2-PROPANOL 67-63-0	5050 mg/kg	12800 mg/kg	= 72600 mg/m³ (Rat) 4 h
TITANIUM DIOXIDE 13463-67-7	> 10000 mg/kg (Rat)	-	-
CARBON BLACK 1333-86-4	> 15400 mg/kg (Rat)	-	> 4.6 mg/m³ (Rat) 4 h
METHYL ISOBUTYL KETONE 108-10-1	= 2080 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	2000 - 4000 ppm (Rat) 4 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
ETHANOL 64-17-5	A3	Group 1	Known	X
CRYSTALLINE SILICA 14808-60-7	A2	Group 1	Known	X
TITANIUM DIOXIDE 13463-67-7	-	Group 2B	-	X
CARBON BLACK 1333-86-4	A3	Group 2B	-	X
METHYL ISOBUTYL KETONE 108-10-1	A3	Group 2B	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Chronic toxicity May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Contains a known or suspected reproductive toxin.

Target organ effects Blood, Central nervous system, Eyes, Liver, Reproductive system, Respiratory system, Skin, Thyroid, Lungs.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 7016 mg/kg
ATEmix (dermal) 58017 mg/kg
ATEmix (inhalation-dust/mist) 102.2 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.042 % 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
ETHANOL 64-17-5	-0.32
2-PROPANOL 67-63-0	0.05
METHYL ISOBUTYL KETONE 108-10-1	1.19

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 U154 U161

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
ETHANOL 64-17-5	Toxic Ignitable
2-PROPANOL 67-63-0	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	Complies
ENCS	Does not comply
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 %
2-PROPANOL - 67-63-0	1.0
METHYL ISOBUTYL KETONE - 108-10-1	0.1

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)
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
ETHANOL 64-17-5	Carcinogen Developmental
CRYSTALLINE SILICA 14808-60-7	*Carcinogen
TITANIUM DIOXIDE 13463-67-7	*Carcinogen (airborne, unbound particles of respirable size)
METHANOL 67-56-1	Developmental
CARBON BLACK 1333-86-4	*Carcinogen (airborne, unbound particles of respirable size)
METHYL ISOBUTYL KETONE 108-10-1	Carcinogen Developmental

• *The asterisked chemical(s) listed are not subject to Proposition 65 because they are not airborne in the finished product
• Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage
• Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
KAOLIN 1332-58-7	X	X	X
ETHANOL 64-17-5	X	X	X
2-PROPANOL 67-63-0	X	X	X
CRYSTALLINE SILICA 14808-60-7	X	X	X
TITANIUM DIOXIDE 13463-67-7	X	X	X
METHANOL 67-56-1	X	X	X
CARBON BLACK 1333-86-4	X	X	X
METHYL ISOBUTYL KETONE 108-10-1	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 08-Jun-2021

Disclaimer

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End of Safety Data Sheet

SAFETY DATA SHEET

Revision Date 05-Oct-2020 **Version** 17

1. IDENTIFICATION

Product identifier
Product Name MEDIUM STRENGTH THREADLOCKER BLUE 6 ML

Other means of identification
Product Code 24200

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
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 Blue **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
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
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash 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
Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
DIMETHYLBENZYL HYDROPEROXIDE	80-15-9	1 - 5
TITANIUM DIOXIDE	13463-67-7	0.1 - 1
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 See section 12 for additional ecological information. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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 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/sparks/open flames/hot surfaces. - 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 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
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
CUMENE 98-82-8	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m³ (vacated) S* S*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 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 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	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	> 200 °C / > 392 °F	
Flash point	131 °C / 268 °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	1.01	
Water solubility	Immiscible in water	
Solubility(ies)	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	1,100 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
VOC content	<3%
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 drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure if inhaled.

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
TITANIUM DIOXIDE 13463-67-7	> 10000 mg/kg (Rat)	-	-
CUMENE 98-82-8	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 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
TITANIUM DIOXIDE 13463-67-7	-	Group 2B	-	X
CUMENE 98-82-8	-	Group 2B	Reasonably Anticipated	X

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Not classifiable as a human carcinogen
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) 18864 mg/kg
ATEmix (dermal) 54321 mg/kg
ATEmix (inhalation-dust/mist) 24.7 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.094 % 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.

Contaminated packaging Do not reuse container.

US EPA Waste Number U055 U096 U166

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	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Not Listed

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
CUMENE - 98-82-8	0.1

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
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
TITANIUM DIOXIDE 13463-67-7	*Carcinogen (airborne, unbound particles of respirable size)
CUMENE 98-82-8	Carcinogen

• *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
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	X	X	X
SACCHARIN 81-07-2	X	X	X
CUMENE 98-82-8	X	X	X
2-BUTOXYETHANOL 111-76-2	X	X	X
1,4-NAPHTHOQUINONE 130-15-4	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 05-Oct-2020

Disclaimer
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End of Safety Data Sheet

SAFETY DATA SHEET

Issue Date 10-Mar-2015 **Revision Date** 10-Mar-2015 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Product Name ALPHA BAC

Other means of identification
Product Code 5688

Recommended use of the chemical and restrictions on use
Recommended Use Disinfectant. Food Contact Sanitizer. Laundry Sanitizer.
Uses advised against Use only as stated on label.

Details of the supplier of the safety data sheet

Supplier
Alpha Chemical Services, Inc.
46 Morton Street
Stoughton, MA 02072
Phone: (800) 464-9872

Emergency telephone number
Emergency Telephone Chemtrec 1-800-424-9300

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	Not classified
Acute toxicity - Dermal	Not classified
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements
Causes severe skin burns and eye damage

Appearance Clear Red **Physical state** Liquid **Odor** Mild

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Specific Treatment (See Section 4 on the SDS)
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 (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Immediately call a POISON CENTER or doctor/physician
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: Rinse mouth. DO NOT induce vomiting
Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Other Information
Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Alkyl (C12-16) dimethyl benzyl ammonium chloride	68424-85-1	1-5	*
Octyl decyl dimethyl ammonium chloride	32426-11-2	1-5	*
Didecyl Dimethyl Ammonium Chloride	7173-51-5	1-5	*
Ethanol	64-17-5	1-5	*
Dioctyl dimethyl ammonium chloride	5538-94-3	1-5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Skin Contact Wash skin with soap and water.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician

Inhalation Remove to fresh air.

Ingestion Clean mouth with water and drink afterwards plenty of water.

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 extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No Information available.

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.

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 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.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m^3

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 impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
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	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	Clear Red		
Odor	Mild	**Odor threshold**	No Information available

Property	**Values**	**Remarks • Method**
pH	6.0 - 8.0	
Melting point/freezing point	No Information available	
Boiling point / boiling range	No Information available	
Flash point	None	
Evaporation rate	No Information available	
Flammability (solid, gas)	No Information available	
Flammability Limits in Air		
Upper flammability limit:	No Information available	
Lower flammability limit:	No Information available	
Vapor pressure	No Information available	
Vapor density	No Information available	
Specific Gravity	0.9656	
Water solubility	Complete	
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	
Viscosity	No Information available	
Explosive properties	No Information available	
Oxidizing properties	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
Extremes of temperature and direct sunlight.

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 No data available

Inhalation No data available.

Eye contact No data available.

Skin Contact No data available.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol 64-17-5	= 7060 mg/kg (Rat)	Yes	= 124.7 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. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol 64-17-5	A3	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal 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 No Information available.
STOT - single exposure No Information available.
STOT - repeated exposure No Information available.
Chronic toxicity Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Contains a known or suspected reproductive toxin.
Target organ effects Blood, Central nervous system, EYES, Liver, Reproductive System, Respiratory system, Skin.
Aspiration hazard No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity

8.156053% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethanol 64-17-5	Yes	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50

Persistence and degradability
No Information available.

Bioaccumulation
No Information available.

Chemical Name	Partition coefficient
Ethanol 64-17-5	-0.32

Other adverse effects No Information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes can not 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.

Contaminated packaging Non-refillable container. Do not reuse this container to hold materials other than pesticides or diluted pesticides (rinsate). Offer for recycling if available or puncture and dispose in a sanitary landfill, or by other procedures approved by state and local authorities. Follow Pesticide Disposal instructions.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
AICS	Does not comply

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
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

Chemical Name	California Proposition 65
Ethanol - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethanol 64-17-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 10324-81-10634

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. See the product label for the FIFRA hazard information as required on the pesticide label.

16. OTHER INFORMATION

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	**Physical and Chemical Properties** Yes
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** N/A

Issue Date 10-Mar-2015
Revision Date 10-Mar-2015
Revision Note
No Information available

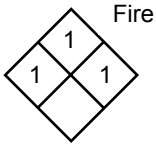
Disclaimer

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

A-9 ALUMINUM CUTTING FLUID

NFPA



RELTON CORPORATION

MATERIAL SAFETY DATA SHEET

Meets requirements of 29 CFR 1910.1200
(Federal Hazard Communication Standard)

HMIS	
Health	1
Fire	1
Reactivity	1

☐ SECTION I

PRODUCT NAME OR NUMBER	**A-9® ALUMINUM CUTTING FLUID**	
MANUFACTURER'S NAME	Relton Corporation	EMERGENCY TELEPHONE NO Chemtrec - (800) 424-9300
ADDRESS (Number, Street, City, State, and Zip Code) 317 Rolyn Place, Arcadia, CA 91007-2838	Non-Emergency Ph. No. (323) 681-2551 (800) 423-1505	
HAZARDOUS MATERIALS DESCRIPTION AND PROPER SHIPPING NAME (49 CFR 172 101) NA NA		HAZARD CLASS (49 CFR 172.101) NA
CHEMICAL FAMILY Mixture: predominately hydrocarbon base with bland additives.		Formula See Section II

☐ SECTION I I - INGREDIENTS

	TLV	PEL	STEL	C.A.S. NO.	%
Mineral Oil	NE	NE	NE	64742-58-1	> 70
Bland Additive	NE	NE	NE	Trade secret	< 25
Bland Additive	NE	NE	NE	Trade secret	< 16
Perfume	NE	NE	NE	-- --	< 1
Green dye, Pharmacy Grade	NE	NE	NE	-- --	trace

(See Section V for Health data)

Data is based on testing mixture as a whole. Neither the mixture nor any of its ingredients is on the carcinogen or suspected-carcinogen list of the NTP, the IARC, or OSHA. Contains no Calif. Prop. 65 substance. Not reportable under SARA. All components are listed on the TSCA inventory.

☐ SECTION III - PHYSICAL DATA

BOILING POINT (X°F) (C°)	400° F	SPECIFIC GRAVITY (H2O=1) @ 25° C	0.883	Freezing Point	-20° F
VAPOR PRESSURE (mm Hg)	100° F: .1 mm	PERCENT VOLATILE BY VOLUME (%)	NA	VOC	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (WATER=1)	NA		
SOLUBILITY IN WATER	Negligible	pH=	NA		
APPEARANCE AND ODOR light green oil with slight,fatty odor .		MATERIAL IS ~~GAS~~ LIQUID ~~PASTE~~ ~~SOLID POWDER~~			

☐ SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used) 266° F CCC	FLAMMABLE LIMITS Non-Flammable	LFL NA	UFL NA
EXTINGUISHING MEDIA Use CO2, dry chemicals , foam, water as a mist only .			
SPECIAL FIRE FIGHTING PROCEDURES Prefer CO2 or sand as with oil fire.			
UNUSUAL FIRE AND EXPLOSION HAZARDS No unusual hazards			
Exposing containers to intense heat could cause drums to rupture. Cool fire-exposed containers with water spray to prevent rup ture.			

☐ SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE
Eyes and skin: may cause mild irritation. Inhalation: may cause mild upper respiratory irritation. Ingestion: possible nausea.

EMERGENCY AND FIRST AID PROCEDURES
Eyes: flush for 15 min. with water. Skin: wash with soap and water. Inhalation: remove to fresh air.
Ingestion: do not induce vomiting; give lots of water to a conscious person. Call Doctor

NE=not established NF=not found NA=not applicable ND=not determined

A-9 ALUMINUM CUTTING FLUID

☐ SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID:
	STABLE	X	Flame, heat, strong oxidizing agents
INCOMPATIBILITY (materials to avoid): Swells natural rubber and some plastics. Slight etching of light metals on prolonged exposure may occur.			
HAZARDOUS DECOMPOSITION PRODUCTS. CO, CO2, and acrolein when combusted			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID:
	WILL NOT OCCUR	X	NA

☐ SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED. Wear respirator and protective clothing .Treat as oil spill. Soak up on absorbent clay or sand and remove to containers.
WASTE DISPOSAL METHOD Transport in DOT-approved container to EPA-approved treatment, storage, and disposal facility. Follow local, State & Federal disposal regulations.

☐ SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) Normally not needed. For oil-type mist, use NIOSH listed respirator .		
VENTILATION Local-mechanical to remove oil mist	LOCAL EXHAUST (Specify Rate) Adequate to avoid fumes and oil mists	SPECIAL Not required normally
	MECHANICAL (General) (Specify Rate) NA	OTHER
PROTECTIVE GLOVES Nitrile-type, oil resistant	EYE PROTECTION Chemical goggles or full faceshield.	
OTHER PROTECTIVE EQUIPMENT Clean clothes. Apron or chemical suit where splashing may occur .		

☐ SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Avoid production of oil mist. Avoid excessive heat. Avoid repeated or prolonged skin or eye contact.
OTHER PRECAUTIONS While there is no TLV established for this product, airborne mist should be kept below the nuisance TLV for oil mist: 5Mg/meter3.

ADDITIONAL INFORMATION

DOT: No hazardous substance — UN or NA#: Not applicable
No hazard class — Freight Classification: Petroleum oil, lubricating
No DOT ID# — It# 155250 Class 65

SARA: Not considered to be subject to Title III

TSCA: All components required to be listed on the inventory are listed.

IARC-NTP-OSHA: Neither the mixture nor any component is listed as a carcinogen or suspected carcinogen.

California Prop. 65 Material: None.

RELTON CORPORATION

317 ROLYN PLACE ARCADIA CALIFORNIA 91007-2838
Phone: (323) 681-2551 (800) 423-1505
Emerg: Chemtrec - (800) 424-9300

Prepared: 12-10-93 Updated: 10-23-97
Updated: 12-6-94 Updated: 02-29-00
Updated: 5-7-96 Updated: 03/10/03

by Dr. Robert E. Pratt,
consulting chemist
Updated: 07/22/05
Updated: 06/10/10
Updated: 01/10/11

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: STRUST SSPR 6PK LEAK SEAL CLEAR

Revision Date: 2/7/2019

Product Identifier: 265495

Supercedes Date: 1/3/2019

Recommended Use: Leak Sealer/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
11% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
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.
Skin Irritation, category 2	H315	Causes skin irritation.

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/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.
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.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	For specific treatment see label
P332+P313	If skin irritation 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.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P501	Dispose of contents/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
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	25-50	GHS08	H304
Propane	74-98-6	10-25	GHS04	H280
n-Butane	106-97-8	2.5-10	GHS04	H280
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Ethyl Acetate	141-78-6	2.5-10	GHS02-GHS07	H225-319-332-336
Methyl Acetate	79-20-9	2.5-10	GHS02-GHS07	H225-319-336
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373
n-Heptane	142-82-5	1.0-2.5	GHS02-GHS07-GHS08	H225-304-315-336
Octane	111-65-9	1.0-2.5	GHS02-GHS07-GHS08	H225-304-315-336
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	41556-26-7	0.1-1.0	GHS07	H317
N-Methyl 2-Pyrrolidone	872-50-4	0.1-1.0	GHS07-GHS08	H315-319-332-335-360
Methanol	67-56-1	0.1-1.0	GHS02-GHS06-GHS08	H225-331-370
Toluene	108-88-3	0.1-1.0	GHS02-GHS07-GHS08	H225-304-315-332-336-361-373

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: 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: 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 due to buildup of steam. 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. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. 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): 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. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. 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. 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. 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.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. 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. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

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	30.0	N.E.	N.E.	N.E.	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.
Xylenes (o-, m-, p- isomers)	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Ethyl Acetate	141-78-6	10.0	400 ppm	N.E.	400 ppm	N.E.
Methyl Acetate	79-20-9	10.0	200 ppm	250 ppm	200 ppm	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Octane	111-65-9	5.0	300 ppm	N.E.	500 ppm	N.E.
n-Heptane	142-82-5	5.0	400 ppm	500 ppm	500 ppm	N.E.
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	41556-26-7	1.0	N.E.	N.E.	N.E.	N.E.
N-Methyl 2-Pyrrolidone	872-50-4	1.0	N.E.	N.E.	N.E.	N.E.
Methanol	67-56-1	1.0	200 ppm	250 ppm	200 ppm	N.E.
Toluene	108-88-3	1.0	20 ppm	N.E.	200 ppm	300 ppm

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. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. 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 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

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.731	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Negligible	**Partition Coefficient, n-octanol/water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 2,230	**Explosive Limits, vol%:**	0.9 - 16.0
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: May be absorbed through the skin in harmful amounts. May cause skin irritation. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

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: Harmful if swallowed. Poison, may be fatal or cause blindness if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: 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. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

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
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
141-78-6	Ethyl Acetate	5620 mg/kg Rat	>18000 mg/kg Rabbit	N.E.
79-20-9	Methyl Acetate	>5000 mg/kg Rat	>5000 mg/kg Rabbit	>49 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
142-82-5	n-Heptane	N.E.	3000 mg/kg Rabbit	103 mg/L Rat
111-65-9	Octane	N.E.	N.E.	>23.36 mg/L Rat
41556-26-7	bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	2615 mg/kg Rat	N.E.	N.E.
872-50-4	N-Methyl 2-Pyrrolidone	3914 mg/kg Rat	8000 mg/kg Rabbit	20 mg/L Rat
67-56-1	Methanol	6200 mg/kg Rat	15840 mg/kg Rabbit	N.E.
108-88-3	Toluene	2600 mg/kg Rat	12000 mg/kg Rabbit	12.5 mg/L Rat

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: 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 and Related Spray Products in Ltd Qty	Aerosols	Aerosols, flammable	Aerosols
Hazard Class:	N.A.	2	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, Acute Toxicity (any route of exposure), Reproductive toxicity, Skin Corrosion or Irritation, 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.

Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4
N-Methyl 2-Pyrrolidone	872-50-4
Methanol	67-56-1
Toluene	108-88-3

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.

U.S. State Regulations:

California Proposition 65:

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

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 1.44

SDS REVISION DATE: 2/7/2019

REASON FOR REVISION: Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
03 - Composition/Information on Ingredients
11 - Toxicological Information
15 - Regulatory Information
Revision 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

Techspray E-LINE BLUE SHOWER Maintenance Cleaner

Section 1. Identification

GHS product identifier : Techspray E-LINE BLUE SHOWER Maintenance Cleaner

Product code : 1620-10S

Other means of identification : Degreasers

Product type : Aerosol.

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

Not applicable.

Supplier's details : Techspray
8125 Cobb Center Drive
Kennesaw, GA 30152
Tel:678-819-1408
Toll free: 800-858-4043
Fax: 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
24/

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
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
GASES UNDER PRESSURE Compressed gas
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 25%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable aerosol.
Causes serious eye irritation.
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. Wear eye or face protection. Wear protective clothing. 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. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : IF exposed or concerned: Get medical 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 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 attention.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Section 2. Hazards identification

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

Other means of identification : Degreasers

Ingredient name	%	CAS number
ethanol	≥10 - ≤25	64-17-5
Isopropyl alcohol	≥10 - ≤25	67-63-0
methanol	≤3	67-56-1

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. 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 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. 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. 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. 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. 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 : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause skin irritation.

Ingestion : Do not ingest. If swallowed then seek immediate medical assistance.

Over-exposure signs/symptoms

Section 4. First aid measures

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : Adverse symptoms may include the following:
central nervous system depression
nausea or vomiting
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. 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. 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. Runoff to sewer may create fire or explosion hazard. 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
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. 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). Water polluting material. May be harmful to the environment if released in large quantities.

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). 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. 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 breathing gas. Avoid breathing vapor or mist. Avoid release to the environment. 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. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethanol	**ACGIH TLV (United States, 3/2015).** STEL: 1000 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 1900 mg/m³ 10 hours. TWA: 1000 ppm 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1900 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1900 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.
Isopropyl alcohol	**ACGIH TLV (United States, 3/2015).** STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. **NIOSH REL (United States, 10/2013).** STEL: 1225 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m³ 10 hours. TWA: 400 ppm 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 980 mg/m³ 8 hours. TWA: 400 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** STEL: 1225 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m³ 8 hours. TWA: 400 ppm 8 hours.
methanol	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin.** STEL: 328 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 262 mg/m³ 8 hours. TWA: 200 ppm 8 hours. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** STEL: 325 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 260 mg/m³ 10 hours. TWA: 200 ppm 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 260 mg/m³ 8 hours. TWA: 200 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** **Absorbed through skin.** STEL: 325 mg/m³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 260 mg/m³ 8 hours. TWA: 200 ppm 8 hours.

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.

Section 8. Exposure controls/personal protection

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.

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 : Clear. Colorless.

Odor : Characteristic.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : >1 ((TCE=1) = 1)

Flammability (solid, gas) : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

Lower and upper explosive (flammable) limits : Lower: 1.1%
Upper: 6.7%

Vapor pressure : 7.4 kPa (55.5 mm Hg) [room temperature]

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Section 9. Physical and chemical properties

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 30.26 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
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-

Section 11. Toxicological information

				milligrams	
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethanol	-	1	-
Isopropyl alcohol	-	3	-
methanol	None.	-	-

Reproductive toxicity

Not available.

Teratogenicity

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 : Causes serious eye irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause skin irritation.

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:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : Adverse symptoms may include the following:
central nervous system depression
nausea or vomiting
Ingestion Seek medical attention.

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 : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

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

Route	ATE value
Oral	39113.6 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
Isopropyl alcohol	Acute LC50 1400000 to 1950000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
methanol	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon -	48 hours

Section 12. Ecological information

	Acute LC50 3289 to 4395 mg/l Fresh water Acute LC50 290 mg/l Fresh water Chronic NOEC 9.96 mg/l Marine water	Adult Daphnia - Daphnia magna - Neonate Fish - Danio rerio - Egg Algae - Ulva pertusa	48 hours 96 hours 96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ethanol	-0.35	-	low
Isopropyl alcohol	0.05	-	low
methanol	-0.77	<10	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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Methanol (I); Methyl alcohol (I)	67-56-1	Listed	U154

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	-	-	-	UN1950	UN1950	ID8000
UN proper shipping name	Consumer commodity ORM-D	Consumer commodity ORM-D	Consumer commodity ORM-D	Aerosols, flammable	AEROSOLS IN LIMITED QUANTITIES OF CLASS 2 (heptane, 1, 1-difluoroethane)	Consumer commodity ORM-D ID8000 (ethanol)

Section 14. Transport information

Transport hazard class(es)	ORM-D	ORM-D	ORM-D	2 	2.1 	9 
Packing group	-	-	-	II	II	-
Environmental hazards	Yes.	No.	No.	Yes.	No.	No.
Additional information	This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2).	-	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Hazard identification number** UN1950 **Tunnel code** (D)	-	The environmentally hazardous substance mark may appear if required by other transportation regulations.

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 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :
TSCA 8(a) PAIR: heptane
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act (CAA) 112 regulated flammable substances: 1,1-difluoroethane

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

Section 15. Regulatory information

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Sudden release of pressure
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
ethanol Isopropyl alcohol methanol	≥10 - ≤25 ≥10 - ≤25 ≤3	Yes. Yes. Yes.	No. No. No.	No. No. No.	Yes. Yes. Yes.	Yes. No. No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Isopropyl alcohol methanol	67-63-0 67-56-1	≥10 - ≤25 ≤3
Supplier notification	Isopropyl alcohol methanol	67-63-0 67-56-1	≥10 - ≤25 ≤3

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 : The following components are listed: HEPTANE; N-HEPTANE; DIFLUOROETHANE; ETHYL ALCOHOL; DENATURED ALCOHOL; ISOPROPYL ALCOHOL; 2-PROPANOL; METHANOL; METHYL ALCOHOL

New York : The following components are listed: Methanol

New Jersey : The following components are listed: n-HEPTANE; HEPTANE; 1,1-DIFLUOROETHANE; ETHANE, 1,1-DIFLUORO-; ETHYL ALCOHOL; ALCOHOL; ISOPROPYL ALCOHOL; 2-PROPANOL; METHYL ALCOHOL; METHANOL

Pennsylvania : The following components are listed: HEPTANE; DENATURED ALCOHOL; ETHANOL; ISOPROPYL ALCOHOL MANUFACTURE (STRONG-ACID PROCESS); METHANOL

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
ethanol methanol	No. No.	No. Yes.	Yes. No.	No. 23000 µg/day (ingestion) 47000 µg/day (inhalation)

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Section 15. Regulatory information

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.

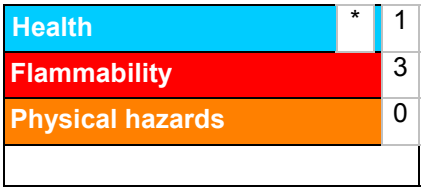
International lists

National inventory

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.
Japan	:	**Japan inventory (ENCS)**: All components are listed or exempted. **Japan inventory (ISHL)**: Not determined.
Malaysia	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Turkey	:	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 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.)

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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.

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 1A	Calculation method

History

Date of printing : 8/15/2019

Date of issue/Date of revision : 8/15/2019

Date of previous issue : 8/15/2019

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
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

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.

Prepared according to Global Harmonized System (GHS) standards

SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

Lubrication Technologies, Inc.
900 Mendelssohn Avenue North
Golden Valley, MN 55427-4309
Tel: 763-545-0707

Product Trade Name: **Viking Drill Ultra S/P™ Super Premium**

CAS Number:	Mixture
Synonyms/Other:	Norseman Drill Ultra S/P™ Super Premium
Part Number(s):	N/A
Recommended Use:	Metal working fluid
Restrictions on Use:	Not determined
Created Date:	9/16/2015
Preparation/Revision Date:	9/28/2015
Emergency Phone Number:	1-800-424-9300 (CHEMTREC)
SDS CODE:	10376

SECTION 2 HAZARD IDENTIFICATION

Appearance:	Yellow Liquid
Odor:	Mild Petroleum
Classification:	This material is not considered to be hazardous according to the Globally Harmonized System of Classification and Labelling Chemicals (GHS), Third Revised Edition.
Target Organs:	Not applicable.
Pictogram(s):	None required.
Signal Word:	None required.
Hazard Statement:	Not required.
Other Hazards:	Not determined.
Prevention:	None required.
Response:	None required.
Storage Procedures:	None required.
Disposal:	None required.
Other:	See section 11 for complete health hazard information.

SECTION 3 COMPOSITION OF INGREDIENTS

Component	CAS Number	Percentage (by weight)
Alkanes, C20-28, Chloro	63449-39-8	90-100%

The balance of components do not contribute to the overall classification of the fluid, according to the GHS Standard.

SECTION 4 FIRST AID MEASURES

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:	Call a doctor if you feel unwell.
Inhalation:	Get medical advice or attention if you feel unwell or are concerned.
Ingestion:	If you feel unwell or concerned: Get medical advice/attention. Rinse mouth. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.
Other:	No additional information

SECTION 5 FIRE FIGHTING MEASURES

Flash Point:	200°C by Cleveland Open Cup Tester.
Flammable limits:	Not determined.
Extinguishing media:	Use dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.
Special firefighting procedures:	DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).
Unusual fire & explosion hazards:	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. High temperatures may create heavy flammable vapors that may settle along ground level and low spots to create an invisible fire hazard.
Byproducts of combustion:	Fires involving this product may release oxides of carbon, phosphorus, nitrogen and sulfur; reactive hydrocarbons and irritating vapors.
Autoignition temperature:	Not determined.
Explosion data:	Not determined. Care should always be exercised in dust/mist areas.
Other:	Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill control procedures (land):	Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, heaters, etc.). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities. In case of road spill or accident contact Chem-Trec (800-424-9300).
Spill control procedures (water):	Try to contain large spills with floating booms to prevent spill from spreading. Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard at 800-424-8802).
Waste disposal method:	Do not empty into drains. All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. See Section 14.
Other:	CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture will be regulated.

SECTION 7 HANDLING AND STORAGE

Handling procedures: Keep containers closed when not in use. Do not transfer to unmarked containers. 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.
Handling temperatures should not exceed 60°C (140°F) to minimize danger of burns. Open containers carefully in a well ventilated area or use appropriate respiratory protection. Wash thoroughly after handling.

Storage procedures: Store containers away from heat, sparks, open flame, or oxidizing materials. Extended storage at excessive temperatures may produce odorous and toxic fumes from product decomposition.

Additional information: No additional information.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product:

	OSHA TWA	OSHA STEL	ACGIH TWA
Alkanes, C20-28, Chloro	n/a	n/a	n/a

TWA – Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
STEL – Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

All base oils, including additive carriers, contain <3.0% DMSO extractable material.

Personal protection: Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.

Respiratory protection: None required if ventilation is adequate. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air purifying respirator.

Eye protection: Eye protection is strongly recommended. Wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

Hand protection: Impervious, chemically resistant gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.

Other protection: Use of an apron and overboots of chemically impervious materials such as neoprene or nitrile rubber is recommended based on level of activity and exposure. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.

Local control measures: Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure. Eyewash stations and showers should be available in areas where this material is used and stored.

Other: Consumption of food and drink should be avoided in work areas where product is present. Always wash hands and face with soap and water before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow Liquid
Odor:	Mild Petroleum
Odor threshold:	Not determined.
pH:	Not applicable.
Melting/Freezing point:	Not determined.
Initial boiling point:	Not determined.
Boiling range:	Not determined.
Flash point:	200°C.
Evaporation rate:	Not determined.
Flammability:	Not determined.
Upper flammable limit:	Not determined.
Lower flammable limit:	Not determined.
Vapor pressure:	Not determined.
Vapor density:	Not determined.
Relative density:	1.1 - 1.3 g/cm3 @ 25 C
Solubility:	Negligible in water, miscible in most petroleum solvents.
Partition Coefficient:	Not determined.
Auto-ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Viscosity:	960 cSt at 40°C.
Other	Not applicable.

SECTION 10 STABILITY AND REACTIVITY

Reactivity	
Chemical stability:	Material is chemically stable at room temperatures and pressure.
Hazardous polymerization:	Will not occur.
Conditions to avoid:	Avoid high temperatures and product contamination.
Incompatibility with other materials:	Avoid contact with acids and strong oxidizing materials.
Decomposition products:	Smoke, carbon monoxide, carbon dioxide, and other aldehydes of incomplete combustion. Oxides of carbon, nitrogen, and sulfur; reactive hydrocarbons and irritating vapors.
Other:	Not applicable.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity (LD50) *See note at the bottom of the section

Oral:	>5000 mg/kg
Dermal:	>5000 mg/kg
Inhalation:	>20.0 mg/l
Skin irritation:	Non-irritant
Eye irritation:	Non-irritant
Dermal sensitization:	Not expected to have a sensitizing effect.
Respiratory sensitization:	Not expected to have a sensitizing effect.
Aspiration Hazard:	Not applicable

Chronic Toxicity

Mutagenicity:	Not suspected of causing genetic defects
Carcinogenicity:	Not suspected of causing cancer.
Reproductive toxicity:	Not expected to have adverse effects on reproduction.
STOT-single exposure:	Not expected to have adverse effects.
STOT-repeated exposure:	Not expected to have long term adverse effects.
Other:	*All data in this section is based off calculations from Part 3 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.

SECTION 12 ECOLOGICAL INFORMATION

Environmental toxicity

Fish:	> 100 mg/l.
Invertebrates:	> 100 mg/l.
Aquatic plants:	> 100 mg/l.
Microorganism:	> 100 mg/l.
Persistence/Degradability:	This product is not expected to be readily biodegradable.
Bioaccumulation:	Not determined.
Mobility in soil:	Not determined.
Other:	All classifications are based on calculations in Part 4 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal:	This product unadulterated by other materials can be classified as a non-hazardous waste. Depending on use, used product may be regulated. Dispose of in a licensed facility. Do not discharge product in to sewer system. Dispose of containers by crushing or puncturing, so as to prevent unauthorized use of used containers. Waste management should be in full compliance with federal, state, and local laws.
Other	The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate.

SECTION 14 TRANSPORT INFORMATION

Land Transport (DOT):	Not regulated for land transport.
Proper Shipping Name:	Not applicable.
Land Transport (TDG):	Not regulated for land transport.
Proper Shipping Name:	Not applicable.
Sea Transport (IMDG):	Not regulated for sea transport.
Proper Shipping Name:	Not applicable.
Air Transport (IATA):	Not regulated for air transport.
Proper Shipping Name:	Not applicable.
Other:	Not applicable.

SECTION 15 REGULATORY INFORMATION

Federal Regulation

Clean water act/oil: Under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spill or discharges that produce a visible sheen or film on surface of water, or in waterways, ditches, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.

TSCA: All components of this material are listed in the U.S. TSCA Inventory.

Other TSCA: Not applicable.

SARA title III: Section 302/304 extremely hazardous substances:

None.

Section 311, 312 hazard categorization:

Acute (immediate health effects):	NO
Chronic (delayed health effects):	NO
Fire (hazard):	NO
Reactivity (hazard):	NO
Pressure (sudden release hazard):	NO

Section 313 toxic chemicals:

No components present are at or greater than the de minimis (minimum reportable) concentration requirements for reporting.

CERCLA: For stationary/moving sources – reportable quantity (due to): Not hazardous due to the petroleum exclusion.

State Regulations

Right-to-know Not determined.

Other: A release of this product, as supplied, is exempt from reporting under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). However, releases may be reportable to the Nation Response Center under the Clean Water Act, 33 U.S.C. 1321(b)(3) and (5) - see head of Section 15. Failure to report may result in substantial civil and criminal penalties.

Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.

SECTION 16 OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	0	0	0 = Minimal
FIRE:	0	0	1 = Slight
REACTIVITY:	0	0	2 = Moderate
SPECIFIC HAZARD:	None	N/A	3 = Serious
PROTECTION INDEX:	N/A	B	4 = Severe

Version: II

Revisions / Comments: None. 09/16/2015
Update to Product Trade Name and Synonyms/Other. 9/28/2015

Safety Data Sheet
California CARB Compliant

1 - Identification

Product Name: WD-40 Multi-Use Product Aerosol **Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion** **Restrictions on Use: None identified** **SDS Date Of Preparation: August 2, 2021**	**Manufacturer: WD-40 Company** **Address: 9715 Businesspark Avenue San Diego, California, USA 92131** **Telephone:** **Emergency: 1-888-324-7596** **Information: 1-888-324-7596** **Chemical Spills: 1-800-424-9300 (Chemtrec)** **1-703-527-3887 (International Calls)**

2 – Hazards Identification

Hazcom 2012/GHS Classification:
Flammable Aerosol Category 1
Gas Under Pressure: Compressed Gas
Aspiration Toxicity Category 1
Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)

Note: 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.

Label Elements:

DANGER!
Extremely Flammable Aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.

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 vapors or mists.
Use only outdoors or in a well-ventilated area.

Response
IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

Storage
Store locked up.
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 local and national regulations.

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
LVP Aliphatic Hydrocarbon	64742-47-8	45-50%	Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9 64742-65-0 64742-53-6 64742-54-7 64742-71-8	<35%	Not Hazardous
Aliphatic Hydrocarbon	64742-47-8	<25%	Flammable Liquid Category 3 Aspiration Toxicity Category 1 Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)
Carbon Dioxide	124-38-9	2-3%	Simple Asphyxiant Gas Under Pressure, Compressed Gas

Note: The specific chemical identity and exact percentages are a trade secret.

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.
Signs and Symptoms of Exposure: Harmful or fatal if swallowed. Aspiration of liquid into the lungs during swallowing or vomiting may cause lung damage. May cause eye and respiratory irritation. Inhalation of mists or vapors may cause drowsiness, dizziness and other nervous system effects. Skin contact may cause drying of the skin.
Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

5 – Fire Fighting Measures

Suitable (and unsuitable) Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Specific Hazards Arising from the Chemical: Extremely flammable aerosol. 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. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.
Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.
Methods and Materials for Containment/Cleanup: Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.
Conditions for Safe Storage: Store in a cool, well-ventilated area, away from incompatible materials. Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA (Inhalable) ACGIH TLV (as Mineral oil) 5 mg/m3 TWA OSHA PEL (as Oil mist, mineral)
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA, 30,000 ppm STEL ACGIH TLV 5000 ppm TWA OSHA PEL

The Following Controls are Recommended for Normal Consumer Use of this Product
Appropriate Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended
Appropriate Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.
Personal Protection:
Eye Protection: Safety goggles recommended where eye contact is possible.
Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Appearance:	Light green to amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point:	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	138°F (59°C) Tag Closed Cup (liquid)	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas):	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	24.1%	Pour Point:	-63°C (-81.4°F) ASTM

	MIR=0.43gO3/gVOC		D-97

10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions
Chemical Stability: Stable
Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

Symptoms of Overexposure:
Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
Chronic Effects: None expected.
Carcinogen Status: None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.
Reproductive Toxicity: None of the components is considered a reproductive hazard.

Numerical Measures of Toxicity:
Acute Toxicity Estimates: Oral > 5,000 mg/kg; Dermal >2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

12 – Ecological Information

Ecotoxicity: No specific aquatic toxicity data is currently available; however components of this product are not expected to be harmful to aquatic organisms
Persistence and Degradability: Components are readily biodegradable.
Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients.
Mobility in Soil: No data available
Other Adverse Effects: None known

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: UN1950, Aerosols, 2.1 Ltd. Qty
(Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)
IMDG Shipping Description: UN1950, Aerosols, 2.1, LTD QTY
ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1

NOTE: WD-40 Company does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

15 – Regulatory Information

U.S. Federal Regulations:
CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Refer to Section 2 for the OSHA Hazard Classification.
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not require a California Proposition 65 warning.
VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.
Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List or exempt from notification

16 – Other Information

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Physical Hazard – 0 (minimal hazard)

Revision Date: August 2, 2021 Supersedes: March 5, 2019

Revision Summary: Section 9: Appearance

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

Reviewed by: I. Kowalski Regulatory Affairs Dept.

1012200/No.0084706

CUSTOMER: 381510	ORDER #: 3711065
BATCH #: 2039495	DELIVERY ID: 15415987
PICK ZONE: AER2	PICK SEQUENCE #: 22
PRODUCT NAME: X-433, MM	BARCODE #: 12061189

Safety Data Sheet X-433, MM

Supercedes Date 10/22/2013 **Issuing Date** 01/12/2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name X-433, MM
Recommended use Lubricant
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 12061189
Chemical nature Aerosol
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Gray **Physical state** liquid **Odor** Solvent

GHS Classification

Physical Hazards

Flammable Aerosols	Category 2
Gases under pressure	Compressed Gas

Health Hazard

Aspiration Toxicity	Category 1
Specific target organ systemic toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Other hazards
None

Labeling
Signal Word
DANGER

Hazard statements
H223 - Flammable aerosol
H336 - May cause drowsiness or dizziness
H304 - May be fatal if swallowed and enters airways
H373 - May cause damage to organs through prolonged or repeated exposure
H280 - Contains gas under pressure; may explode if heated

Precautionary Statements
P210 - Keep away from heat, sparks, open flames or hot surfaces.
P211 - Do not spray on an open flame or other ignition source
P251 - Pressurized container: Do not pierce or burn, even after use
P270 - Do not eat, drink or smoke when using this product.
P260 - Do not breathe vapors, mist or gas.
P271 - Use in a well-ventilated area.
P264 - Wash face, hands and any exposed skin thoroughly after handling
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a physician if unwell.
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.
P410 + P403 - Protect from sunlight. Store in a well -ventilated place
P412 - Do not expose to temperatures exceeding 50 °C/122 °F
P501 - Dispose of contents and container in accordance with applicable local regulations.

42 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Weight % *
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	64742-52-5	15-40
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	64742-53-6	15-40
Petrolatum	8009-03-8	7-13
Sodium sulfonate	68608-26-4	5-10
Isobutane	75-28-5	5-10
Propane	74-98-6	1-5
Polybutene	9003-29-6	1-5
Stoddard solvent	8052-41-3	1-5
Petroleum distillates, solvent dewaxed heavy paraffinic (<3% DMSO extractable)	64742-65-0	1-5
Hexylene glycol	107-41-5	1-5
1,2,4- Trimethylbenzene	95-63-6	0.1-1

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

General advice Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist, or gas.

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Skin Contact Wash off with soap and plenty of water. Get medical attention if irritation develops and persists.

Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Notes to physician Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.

5. FIRE-FIGHTING MEASURES

Flash Point 201.2 °F / 94 °C **Method** Seta closed cup

Flammability Limits in Air %: Mixture. **Upper:** 9.5 **Lower:** 0.9

Suitable Extinguishing Media

Foam. Alcohol-resistant foam. Carbon dioxide (CO2). Water spray. Dry powder. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Material can create slippery conditions. Flame extension: 9.8 inches / 25 cm and Burnback: 0 inch / 0 cm.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure -demand, NOHSC (approved or equivalent) and full protective gear.

Aerosol Level (NFPA 30B) - 3

NFPA	**Health** 2	**Flammability** 4	**Instability** 0
HMIS	**Health** 2	**Flammability** 4	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non -combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Ensure adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Wear personal protective equipment.

Storage Store in original container. Keep in a dry, cool and well -ventilated place. Keep away from heat and sources of ignition.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	TWA: 5 mg/m^3; STEL: 10 mg/m^3	TWA: 5 mg/m^3	No data available
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	5 mg/m^3 as oil mist	10 mg/m^3 as oil mist	No data available
Petrolatum	5 mg/m^3 as oil mist	10 mg/m^3 as oil mist	No data available
Isobutane	STEL: 1000 ppm	No data available	TWA: 800 ppm TWA: 1900 mg/m^3
Propane	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m^3	2100 ppm TWA: 1000 ppm TWA: 1800 mg/m^3
Polybutene	5 mg/m^3 as oil mist	10 mg/m^3 as oil mist	No data available
Stoddard solvent	TWA: 100 ppm	TWA: 500 ppm TWA: 2900 mg/m^3	20000 mg/m^3 Ceiling: 1800 mg/m^3 TWA: 350 mg/m^3
Petroleum distillates, solvent dewaxed heavy paraffinic (<3% DMSO extractable)	TWA: 5 mg/m^3 STEL: 10 mg/m^3	TWA: 5 mg/m^3	No data available
Hexylene glycol	Ceiling: 25 ppm	No data available	Ceiling: 25 ppm Ceiling: 125 mg/m^3
1,2,4- Trimethylbenzene	TWA: 25 ppm	No data available	TWA: 25 ppm TWA: 125 mg/m^3

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re -use. Wear protective gloves/clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid	**Viscosity**	Slight viscous
Color	Gray	**Odor**	Solvent
Odor Threshold	Not applicable	**Appearance**	Opaque
pH	Not applicable	**Specific Gravity**	0.857
Evaporation Rate	18.85 (Butyl acetate=1)	**Percent Volatile (Volume)**	23.7
VOC Content (%)	17.2	**VOC Content (g/L)**	147.4
Vapor Pressure	1762.54 mmHg @ 70°F	**Vapor Density**	1.4 (Air = 1.0)
Solubility	Negligible	**n-Octanol/Water Partition**	No data available
Melting Point/Range	No data available	**Decomposition Temperature**	No data available
Boiling Point/Range	No data available	**Flammability (solid, gas)**	No data available
Flash Point	201.2 °F / 94 °C	**Method**	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %:	Mixture	**Upper:** 9.5 **Lower:** 0.9	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Keep away from open flames, hot surfaces, and sources of ignition.
Incompatible Products	Strong oxidizing agents, Strong acids, Aldehydes, Ketones.
Decomposition Temperature	No data available
Hazardous Decomposition Products	Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Aldehydes, Ketones.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50	4,960.48
Dermal LD50	2,214.25
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available
Principle Route of Exposure	Inhalation, Skin contact, Eye contact, Ingestion.
Primary Routes of Entry	Inhalation, Eye contact, Skin contact, Ingestion.
Acute Effects:	
Eyes	Low hazard for usual industrial or commercial handling.
Skin	Low hazard for usual industrial or commercial handling.
Inhalation	May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Causes headache, drowsiness or other effects to the central nervous system. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.
Chronic Toxicity	Repeated or prolonged exposure may cause central nervous system damage. Kidney injury may occur.
Target Organ Effects	Central nervous system, Heart, Liver, Kidney, Blood, Respiratory system, Immune system.
Aggravated Medical Conditions	Respiratory disorders, Neurological disorders, Skin disorders, Kidney disorders, Blood disorders.

Component Information

Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable) 64742-52-5	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	no data available	no data available	no data available
Petrolatum 8009-03-8	no data available	= 3600 mg/kg (Rabbit)	no data available	no data available	no data available
Isobutane 75-28-5	no data available	no data available	= 658 mg/L (Rat) 4 h	no data available	no data available
Propane 74-98-6	no data available	no data available	= 658 mg/L (Rat) 4 h	no data available	no data available
Petroleum distillates, solvent dewaxed heavy paraffinic (<3% DMSO extractable) 64742-65-0	>5000 mg/kg (rat)	>5000 mg/kg (rabbit)	no data available	no data available	no data available
Hexylene glycol 107-41-5	= 3692 mg/kg (Rat)	no data available	> 310 mg/m^3 (Rat) 1 h	no data available	no data available
1,2,4- Trimethylbenzene 95-63-6	= 3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 18 g/m^3 (Rat) 4 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Isobutane 75-28-5	no data available	no data available	no data available	no data available	Central nervous system
Propane 74-98-6	no data available	no data available	no data available	no data available	Central nervous system
Stoddard solvent 8052-41-3	no data available	no data available	no data available	no data available	Skin Central nervous system Eyes Respiratory system Kidney
Hexylene glycol 107-41-5	no data available	no data available	no data available	no data available	Skin Central nervous system Eyes Respiratory system
1,2,4- Trimethylbenzene 95-63-6	no data available	no data available	no data available	no data available	Blood Skin Central nervous system Eyes Respiratory system

Carcinogenicity There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	log Pow
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	No information available.	LC50 > 5000 mg/L Oncorhynchus mykiss 96 h	No information available	1000: 48 h Daphnia magna mg/L EC50	N/A
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	No information available.	LC50 > 5000 mg/L Oncorhynchus mykiss 96 h	No information available	1000: 48 h Daphnia magna mg/L EC50	N/A

Isobutane	No information available.	No information available.	No information available	No information available.	2.88
Propane	No information available.	No information available.	No information available	No information available.	2.3
Petroleum distillates, solvent dewaxed heavy paraffinic (<3% DMSO extractable)	No information available.	LC50 > 5000 mg/L Oncorhynchus mykiss 96 h	No information available	1000: 48 h Daphnia magna mg/L EC50	N/A
Hexylene glycol	No information available.	LC50 10500 - 11000 mg/L Pimephales promelas 96 h LC50 = 10000 mg/L Lepomis macrochirus 96 h LC50 = 8690 mg/L Pimephales promelas 96 h LC50 = 10700 mg/L Pimephales promelas 96 h	EC50 = 3038 mg/L 5 min	2700 - 3700: 48 h Daphnia magna mg/L EC50	0.13986
1,2,4- Trimethylbenzene	No information available.	LC50 7.19 - 8.28 mg/L Pimephales promelas 96 h LC50 = 7.72 mg/L Pimephales promelas 96 h	No information available	6.14: 48 h Daphnia magna mg/L EC50	3.63

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Contents under pressure. Do not puncture. Empty remaining contents. Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name Consumer commodity
Hazard Class ORM-D
Description Consumer commodity,ORM-D

TDG
Proper shipping name Aerosols
Hazard Class 2.1
UN-No UN1950
Description UN1950, AEROSOLS,2.1, LTD QTY

ICAO
UN-No UN1950
Proper Shipping Name Aerosols
Hazard Class 2.1
Shipping Description UN1950, AEROSOLS, FLAMMABLE 2.1 LTD QTY

IATA
UN-No UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1
ERG-Code 10L
Shipping Description UN1950,AEROSOLS, FLAMMABLE ,2.1 LTD QTY

IMDG/IMO
Proper Shipping Name Aerosols
Hazard Class 2
UN-No UN1950
EmS No. F-D, S-U
Description UN1950, AEROSOLS, ,2.1, LTD QTY

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. 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:

Component	CAS No.	Weight % *	SARA 313 - Threshold Values
1,2,4- Trimethylbenzene	95-63-6	0.1-1	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

16. OTHER INFORMATION

Prepared By	Laura Strauss
Supercedes Date	10/22/2013
Issuing Date	01/12/2016
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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