

Safety Data Sheets

All

All

IPL - Petersburg

01/11/2022

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1. Identification

1.1. Product identifier

Product Identity 587

Alternate Names 587

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

Intended use See Technical Data Sheet.

Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name John Tillman Company
1300 W. Artesia Blvd.
Compton, CA 90220. USA

Emergency

24 hour Emergency Telephone No. 310-764-0110

Customer Service: 310-764-0110

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Eye Irrit. 2;H319 May cause eye irritation.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Warning

H319 May cause eye irritation.

[Prevention]:

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P337+313 If eye irritation persists: Get medical advice / attention.

[Storage]:



No GHS storage statements

[Disposal]:

No GHS disposal statements

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Fibrous glass CAS Number: 0065997-17-3	100	Eye Irrit. 2;H319	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

- General** In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
- Inhalation** Drink water to clear throat, blow nose to evacuate fibers.
- Eyes** Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
- Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
- Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

- Overview** Exposure with the product may cause skin, eye, and respiratory tract irritation. See section 2 for further details.
- Eyes** May cause eye irritation.

5. Fire-fighting measures

5.1. Extinguishing media

Water, carbon dioxide, or dry chemical.



5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Carbon monoxide, carbon dioxide

5.3. Advice for fire-fighters

Thermal decomposition of fiber coating may produce an Irritating mixture of smoke and fumes. Fire fighters should wear full protective gear including NIOSH approved self-contained breathing apparatus.

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Prevent the spread of fiberglass dust & avoid dust generation conditions. Those involved in clean up of particulates should use appropriate personal protective equipment. Vacuum clean dusts. If sweeping is necessary, use a dust suppressant.

7. Handling and storage

7.1. Precautions for safe handling

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Store and use in a manner that will prevent airborne particulates in the workplace.

Incompatible materials: Strong oxidizing agents.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0065997-17-3	Fibrous glass, glass	OSHA	15 mg/m ³ (as nuisance dust)5 mg/m ³ (respirable fraction)
		ACGIH	10 mg/m ³ (as nuisance dust)5 mg/m ³ (respirable fraction)
		NIOSH	No Established Limit



		Supplier	No Established Limit
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Carcinogen Data

CAS No.	Ingredient	Source	Value
0065997-17-3	Fibrous glass, glass	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

- Respiratory** Where dust level exceeds the TLV, use NIOSH approved respirator to protect against nuisance dusts.
- Eyes** Safety glasses with side shield goggles.
- Skin** Work aprons or smocks are recommended. Wear loose fitting long sleeved clothing. NIOSH approved air supplied or self contained respirator. Protective Gloves and barrier creams if necessary.
- Engineering Controls** Local Exhaust Recommended for processing machinery where dust generation is apparent. Mechanical exhaust is acceptable where local exhaust is not feasible.
- Other Work Practices** Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Plain Weave Heavy Weight Fiberglass Fabric
Odor	No smell
Odor threshold	Not determined
pH	Not Measured
Melting point / freezing point	> 1000°F
Initial boiling point and boiling range	Not Measured
Flash Point	250°C (TOC)
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	2.5
Solubility in Water	None
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured



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9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Fibrous glass, glass - (65997-17-3)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable



Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Fibrous glass, glass - (65997-17-3)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

In most cases, woven fiberglass scrap can be disposed of in a sanitary landfill in accordance with Federal, State, & local regulations. Check with local authorities any questions concerning disposal.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated



14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: No		
14.6. Special precautions for user			
No further information			

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification D2B

US EPA Tier II Hazards

Fire: No
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%) :
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Pennsylvania RTK Substances (>1%) :
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.



TILLMAN™
The Brand Pros Demand

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We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H319 Causes serious eye irritation.

End of Document

SAFETY DATA SHEET

ABC DRY CHEMICAL

SECTION I. Chemical Product and Company Identification

Product Name: ABC Dry Chemical Fire Extinguishant
(Fire Extinguishing Agent, Non-pressurized and Pressurized)
Synonym: Multi-Purpose Dry Chemical
Manufacturer: Buckeye Fire Equipment Company
PO Box 428
Kings Mountain, NC 28086
Telephone: 704.739.7415
Web Address: www.buckeyefire.com
Email Address: bfec@buckeyef.com
Recommended Use: Fire suppression, not for human or animal drug use.
Emergency: CHEMTREC 1.800.424.9300
Revision Date: 08/05//2019

SECTION II. Hazard Identification

Note: This SDS covers both pressurized and non-pressurized containers of the product.

GHS – Classification (Pressurized):

Hazard Classification: Gas Under Pressure-Compressed Gas

GHS Label Elements:



Hazard Symbols:

Signal Word: WARNING

Hazard Statements: Contents Under Pressure: may explode if heated

Precautionary Statements: P251 Pressurized container; do not pierce or burn, even after use.

GHS – Classification (Non-pressurized):

Eye Irritation: Category 2B

Skin Irritation: Category 5

Acute Toxicity-Inhalation: Category 5

GHS Label Elements:



Hazard Symbols:

Signal Word: WARNING

Hazard Statements:

H313 May be harmful in contact with skin.

H320 Causes eye irritation

H333 May be harmful if inhaled.

Precautionary Statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P234 Keep in original container.

P251 Pressurized container; do not pierce or burn, even after use

P261 Avoid breathing dust

P264 Wash hands and face thoroughly after handling

P270 Do not eat, drink, or smoke when using this product

P281 Use personal protective equipment as required

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P285	In case of inadequate ventilation, wear respiratory protection
P301+322+331	If swallowed, drink 2-3 glasses of water and do not induce vomiting
302+352	If on skin, wash with soap and water
304+313+341	If inhaled, and if distress occurs, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention.
305+351+338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue to rinse.
337+313	If eye irritation persists, get medical advice/attention.
P401+402+403	Store in original container or extinguisher in a dry, well ventilated place.

SECTION III. Composition/Information on Ingredients

This product is a mixture.

Chemical Name	Weight %*	CAS #
Monoammonium phosphate	85	7722-76-1
Barium Sulfate	8	7727-43-7
Mica	< 3	12001-26-2
Amorphous Silica (non-crystalline)	< 3	112926-00-8 (7631-86-9)
Stannous octoate	< .3	301-10-0
Silicone	< .1	63148-57-2
Pigment	< .1	6358-31-2

Note: Pressurized product uses nitrogen as the expellant 7727-37-9

* % is rounded to the nearest appropriate number. Values are not to be considered product specifications

SECTION IV. First Aid Measures

Eye Exposure- Flush eyes with water until pain-free. If irritation develops or persists, seek medical attention.

Skin Exposure- Wash with plenty of soap and water. If irritation develops or persists, seek medical attention.

Inhalation- Move victim to fresh air. If irritation develops or persists, seek medical attention.

Ingestion- If victim is conscious and alert, give 2-3 glasses of water to drink. Do not induce vomiting. If vomiting occurs and the victim is conscious, give additional water to further dilute the chemical. Prevent aspiration of swallowed product by laying victim on side with head lower than their waist. Seek medical attention. Do not leave victim unattended.

Medical Conditions Possibly Aggravated by Exposure- Inhalation of the product may aggravate existing chronic respiratory conditions such as asthma, emphysema, or bronchitis. Contact with the skin may aggravate an existing skin disease. Chronic overexposure may cause pneumoconiosis ("Dusty Lung" disease).

SECTION V. Firefighting Measures

Extinguishing Media: N/A. This product is an extinguishing agent. It is nonflammable and noncombustible.

Special Firefighting Procedures: N/A

Unusual Fire and Explosion Hazards: This product may decompose in fire and release oxides of carbon, potassium, and nitrogen (Refer to Section X).

Sensitivity to Mechanical Impact or Static Discharge: None

SECTION VI. Accidental Release Measures

In case of accidental release, use the appropriate respiratory protection. Clean up the product using a vacuum or wet sweep and shovel to minimize the generation of dust. Bag or drum the product for disposal. If the product is used and/or contaminated, use personal protective equipment and containment means that are appropriate for the composition of the mixture. Product should be prevented from entering waterways.

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SECTION VII. Handling and Storage

Avoid eye, respiratory, and skin exposure. Use the appropriate personal protective equipment when handling. Wash thoroughly after handling (Refer to Section VIII). Product should be stored in its original container or extinguisher. When the product is contained under pressure (e.g., an extinguisher), inspect the container for rust or damage that may compromise the container integrity. Do not store the product in high humidity and do not mix with other extinguishing agents, particularly potassium bicarbonate-based agents.

SECTION VIII. Exposure Controls and Personal Protection

Exposure Guidelines:

	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Monoammonium phosphate	Particulates Not Otherwise Classified Total Dust- 15 mg/m ³ Respirable Fraction- 5 mg/m ³	Particulates Not Otherwise Classified Total Dust- 10 mg/m ³ Respirable Fraction- 3 mg/m ³
Barium sulfate	Particulates Not Otherwise Classified Total Dust- 15 mg/m ³ Respirable Fraction- 5 mg/m ³	Particulates Not Otherwise Classified Total Dust- 10 mg/m ³ Respirable Fraction- 3 mg/m ³
Mica	6 mg/m ³	3 mg/m ³
Amorphous Silica	6 mg/m ³	10 mg/m ³
Stannous octoate	.1 mg/m ³	.1 mg/m ³
Silicone	Not Regulated	Not Regulated
Pigment	Not Regulated	Not Regulated

During the use of this product on fires, exhaust gases and products of incomplete combustion are the main respiratory hazards. In the manufacture of this product, employers and employees must use their collective judgment in determining the on-the-job settings where the use of a dust mask or respirator is prudent. The need for respiratory protection is not likely for short-term use in well-ventilated areas.

Respiratory Protection: Use an N-95 dust mask for limited exposures and use air-purifying respirators with high efficiency particulate air filters (HEPA filters) for prolonged exposures.

Eye Protection: Wear chemical goggles or full-face air-purifying respirator.

Skin Protection: Use nitrile, latex, or similar gloves and coveralls. Good personal hygiene practices are essential. After handling the product, avoid food, tobacco products, or other means of transferring the product from hand to mouth until after thoroughly washing.

SECTION IX. Physical and Chemical Properties

Chemical Agent

Appearance and Odor: Light yellow fine powder that is odorless.

Apparent Density: 0.82

Solubility: The product is coated with water repellent silicone. Not immediately soluble in water.

pH: Approximately 4 -5

Flash Point: N/A

Flammability: N/A

Vapor Pressure: N/A

Boiling Point: N/A

Explosive or Oxidizing Properties: None

Expellant- Nitrogen

Appearance and Odor: Colorless and odorless.

Specific Gravity: 0.075 lb./ft³@ 70°F as vapor

Solubility: N/A

pH: N/A

Flash Point: Nonflammable

Flammability: Nonflammable

Vapor Pressure: N/A

Boiling Point: -321°F

Explosive or Oxidizing Properties: None

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ABC DRY CHEMICAL

SECTION X. Stability and Reactivity

Reactivity: Pressurized containers may rupture or explode if exposed to high heat

Stability: Stable

Incompatibles: Magnesium, strong oxidizers such as calcium hypochlorite (pool chlorine), strong alkalis, and isocyanic acids.

Decomposition Products: This product may decompose in fire and release carbon monoxide, carbon dioxide, and sulfur dioxide. Oxides of phosphorous and ammonia have been reported.

Hazardous Polymerization: Will not occur

Hazardous Reactions: None

SECTION XI. Toxicological Information

Acute Toxicity: Monoammonium phosphate LD50 (rat): > 1000mg/kg body weight.

Target organs in humans: respiratory system, eyes, and skin. This product is an irritant to epithelial tissue and may aggravate dermatitis. No indication that the product causes sensitization.

Chronic Toxicity: Pneumoconiosis, or “Dusty Lung” disease, may result from chronic exposure to any dust.

Reproductive Toxicity: This product is not known to have any reproductive effects.

Nitrogen: Simple asphyxiant. Exposure at high concentrations can cause suffocation by reducing the available oxygen.

SECTION XII. Ecological Information

Ecotoxicity: Negative effects are unknown. Provides nutrient nitrogen and phosphorous to plant life.

Degradability: Degrades rapidly in wet or humid environment.

Bioaccumulation: Unknown extent.

Mobility in Soil: Water-soluble. May leech into groundwater.

SECTION XIII. Disposal Consideration

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal regulations. Be aware that product used on a fire may be altered or contaminated and thereby require different disposal considerations.

SECTION XIV. Transportation Information

This product is not defined as a hazardous material under U.S. Department of Transportation 49 CFR 172, or by Transport Canada “Transportation of Dangerous Goods” regulations.

Please Note: Although this material is not considered hazardous, when contained in a stored pressure fire extinguisher pressurized with a nonflammable gas, the extinguisher itself is considered a hazardous material by the U.S. Department of Transportation (USDOT) and Transport Canada (TC). The proper shipping name shall be Fire Extinguisher and the UN Identification Number is UN 1044. The USDOT hazard class is Limited Quantity when pressurized to less than 241 psig and when shipped via highway or rail. For shipment by Air or Water consult the current IATA or IMDG Regulations respectively.

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ABC DRY CHEMICAL

SECTION XV. Regulatory Information

International Inventory Status: All ingredients are on the following inventories

<u>Country</u>	<u>Agency</u>	<u>Country</u>	<u>Agency</u>
U.S.A.	TSCA	Australia	AICS
Canada	DSL	Japan	MITI
Europe	EINECS/ELINCS	South Korea	KECL

European Risk and Safety Phrases:

EU Classification-		Harmful
R Phrases-	22 36/37/38	Harmful if swallowed Irritating to eyes, respiratory system, and skin.
S Phrases-	26 36	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice Wear suitable protective clothing

U.S. Federal Regulatory Information:

Non-pressurized; None of the chemicals in this product are under SARA reporting requirements or have SARA Threshold Planning Quantities or CERCLA Reportable Quantities or are regulated under TSCA 8(d).
Pressurized: SARA Title III Section 311/312 Categorization is Pressure Hazard

State Regulatory Information:

Chemicals in this product are covered under the specific State regulations noted:

Alaska	Designated Toxic and Hazardous Substances- None		
California	Permissible Exposure Limits for Chemical Contaminants- None		
Florida	Substance list- Mica dust	Pennsylvania	Hazardous Substance List- None
Illinois	Toxic Substance List- No	Rhode Island	Hazardous Substance List- Mica dust
Kansas	Section 302/303 List- None	Texas	Hazardous Substance List- No
Massachusetts	Substance list- Mica dust	West Virginia	Hazardous Substance List- None
Minnesota	List of Hazardous Substances- None	Wisconsin	Toxic and Hazardous Substances- None
Missouri	Employer Information/Toxic Substance List- None		
New Jersey	Right to Know Hazardous Substance List- None		
North Dakota	List of Hazardous Chemicals, Reportable Quantities- None		

California Proposition 65- No component is listed on the California Proposition 65 List

SECTION XVI. Other Information

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

HMIS RATINGS:

Health 1
Flammability 0
Reactivity 0
Personal Protective Equipment: use N-95 dust mask (See Section 8)

WHMIS (Canadian Workplace Hazardous Materials Identification)

D2B- May irritate eyes, mucous membranes, and/or skin

Revised on 7/24/19: Page 1, Section II GHS-classification (Non-pressurized) changed (Class) to (Category) Skin Irritation: Class 3 to Category 5, and Inhalations from Class 5 to Category 5. Revised 8/5/19 (Section II) to add "Acute Toxicity" to Inhalation: Category 5

The information contained herein is given in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made.

Common Name: ABC DRY CHEMICAL FIRE EXTINGUISHANT

Manufacturer: BUCKEYE FIRE EQUIPMENT

SDS Revision Date: 4/1/2015

SDS Format: GHS-US

Grainger Item Number(s): 2LBP1, 31CA37, 35WT05, 35WT06, 35WT07, 35WT08, 35WT09, 35WT10, 35WT11, 35WT41, 35WT42, 35WT43, 35WT44, 3GRW5, 3GRW6, 3GRW7, 3GRW8, 3GRY3, 3GRY4, 3GRY5, 3GRY6, 3GRY7, 3GRY8, 3GRZ4, 44YZ28, 44YZ29, 44YZ30, 44YZ31, 44YZ33, 44YZ35

Manufacturer Model Number(s):

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SAFETY DATA SHEET

ABC DRY CHEMICAL

SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION



PRODUCT NAME: ABC DRY CHEMICAL FIRE EXTINGUISHANT

SYNONYM: MULTI-PURPOSE DRY CHEMICAL

MANUFACTURER:

BUCKEYE FIRE EQUIPMENT COMPANY

110 KINGS ROAD

KINGS MOUNTAIN, NC 28086

TELEPHONE: 704.739.7415

WEB ADDRESS: WWW.BUCKEYEFIRE.COM

EMAIL ADDRESS: BFEC@BUCKEYEF.COM

RECOMMENDED USE: FIRE SUPPRESSION, NOT FOR HUMAN OR ANIMAL DRUG USE.

EMERGENCY:

CHEMTREC: 1.800.424.9300

REVISION DATE: 04/2015

SECTION II. HAZARD IDENTIFICATION



GHS - CLASSIFICATION:

EYE IRRITATION: CLASS 2B

SKIN IRRITATION: CLASS 3

INHALATION: CLASS 5

GHS LABEL ELEMENTS:

HAZARD SYMBOLS: EXCLAMATION MARK

SIGNAL WORD: WARNING

HAZARD STATEMENTS:

H313: MAY BE HARMFUL IN CONTACT WITH SKIN.

H320: CAUSES EYE IRRITATION

H333: MAY BE HARMFUL IF INHALED.

PRECAUTIONARY STATEMENTS:

P101:

IF MEDICAL ADVICE IS NEEDED, HAVE PRODUCT CONTAINER OR LABEL AT HAND.

P102: KEEP OUT OF REACH OF CHILDREN.

P234: KEEP IN ORIGINAL CONTAINER.

P251: PRESSURIZED CONTAINER; DO NOT PIERCE OR BURN, EVEN AFTER USE

P261: AVOID BREATHING DUST

P264: WASH HANDS AND FACE THOROUGHLY AFTER HANDLING

P270: DO NOT EAT, DRINK, OR SMOKE WHEN USING THIS PRODUCT

P281: USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED

P285: IN CASE OF INADEQUATE VENTILATION, WEAR RESPIRATORY PROTECTION

P301+322+331:

IF SWALLOWED, DRINK 2-3 GLASSES OF WATER AND DO NOT INDUCE VOMITING

302+352: IF ON SKIN, WASH WITH SOAP AND WATER

304+313+341:

IF INHALED, AND IF DISTRESS OCCURS, REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. SEEK MEDICAL ADVICE/ATTENTION.

305+351+338:

IF IN EYES, RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES IF PRESENT AND EASY TO DO, AND CONTINUE TO RINSE.

337+313: IF EYE IRRITATION PERSISTS, GET MEDICAL ADVICE/ATTENTION.

P401+402+403:

STORE IN ORIGINAL CONTAINER OR EXTINGUISHER IN A DRY, WELL VENTILATED PLACE.

SECTION III. COMPOSITION/INFORMATION ON INGREDIENTS



THIS PRODUCT IS A MIXTURE.

CHEMICAL NAME	WEIGHT %*	CAS #
MONOAMMONIUM PHOSPHATE	85	7722-76-1
BARIUM SULFATE	10	7727-43-7
MICA	<3	12001-26-2
SILICA	<2	7631-86-9
STANNOUS OCTOATE	<.3	301-10-0
SILICONE	<.1	63148-57-2
PIGMENT	<.1	6358-31-2

* % IS ROUNDED TO THE NEAREST APPROPRIATE NUMBER. VALUES ARE NOT TO BE CONSIDERED PRODUCT SPECIFICATIONS

SECTION IV. FIRST AID MEASURES



EYE EXPOSURE:

FLUSH EYES WITH WATER UNTIL PAIN-FREE. IF IRRITATION DEVELOPS OR PERSISTS, SEEK MEDICAL ATTENTION.

SKIN EXPOSURE:

WASH WITH PLENTY OF SOAP AND WATER. IF IRRITATION DEVELOPS OR PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION:

MOVE VICTIM TO FRESH AIR. IF IRRITATION DEVELOPS OR PERSISTS, SEEK MEDICAL ATTENTION.

INGESTION:

IF VICTIM IS CONSCIOUS AND ALERT, GIVE 2-3 GLASSES OF WATER TO DRINK. DO NOT INDUCE VOMITING. IF VOMITING OCCURS AND THE VICTIM IS CONSCIOUS, GIVE ADDITIONAL WATER TO FURTHER DILUTE THE CHEMICAL. PREVENT ASPIRATION OF SWALLOWED PRODUCT BY LAYING VICTIM ON SIDE WITH HEAD LOWER THAN THEIR WAIST. SEEK MEDICAL ATTENTION. DO NOT LEAVE VICTIM UNATTENDED.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

INHALATION OF THE PRODUCT MAY AGGRAVATE EXISTING CHRONIC RESPIRATORY CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, OR BRONCHITIS. CONTACT WITH THE SKIN MAY AGGRAVATE AN EXISTING SKIN DISEASE. CHRONIC OVEREXPOSURE MAY CAUSE PNEUMOCONIOSIS ("DUSTY LUNG" DISEASE).

SECTION V. FIREFIGHTING MEASURES



EXTINGUISHING MEDIA:

N/A. THIS PRODUCT IS AN EXTINGUISHING AGENT. IT IS NONFLAMMABLE AND NONCOMBUSTIBLE.

SPECIAL FIREFIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS:

THIS PRODUCT MAY DECOMPOSE IN FIRE AND RELEASE OXIDES OF CARBON, POTASSIUM, AND NITROGEN (REFER TO SECTION X).

SENSITIVITY TO MECHANICAL IMPACT OR STATIC DISCHARGE: NONE

SECTION VI. ACCIDENTAL RELEASE MEASURES



IN CASE OF ACCIDENTAL RELEASE, USE THE APPROPRIATE RESPIRATORY PROTECTION. CLEAN UP THE PRODUCT USING A VACUUM OR WET SWEEP AND SHOVEL TO MINIMIZE THE GENERATION OF DUST. BAG OR DRUM THE PRODUCT FOR DISPOSAL. IF THE PRODUCT IS USED AND/OR CONTAMINATED, USE PERSONAL PROTECTIVE EQUIPMENT AND CONTAINMENT MEANS THAT ARE APPROPRIATE FOR THE COMPOSITION OF THE MIXTURE. PRODUCT SHOULD BE PREVENTED FROM ENTERING WATERWAYS.

SECTION VII. HANDLING AND STORAGE



AVOID EYE, RESPIRATORY, AND SKIN EXPOSURE. USE THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT WHEN HANDLING. WASH THOROUGHLY AFTER HANDLING (REFER TO SECTION VIII). PRODUCT SHOULD BE STORED IN ITS ORIGINAL CONTAINER OR EXTINGUISHER. WHEN THE PRODUCT IS CONTAINED UNDER PRESSURE (E.G., AN EXTINGUISHER), INSPECT THE CONTAINER FOR RUST OR DAMAGE THAT MAY COMPROMISE THE CONTAINER INTEGRITY. DO NOT STORE THE PRODUCT IN HIGH HUMIDITY AND DO NOT MIX WITH OTHER EXTINGUISHING AGENTS, PARTICULARLY POTASSIUM BICARBONATE BASED AGENTS.

SECTION VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION



EXPOSURE GUIDELINES:

	OSHA PEL	ACGIH TLV
MONOAMONIUM PHOSPHATE	PARTICULATES NOT OTHERWISE CLASSIFIED	PARTICULATES NOT OTHERWISE CLASSIFIED
	TOTAL DUST: 15 MG/M3	TOTAL DUST: 10 MG/M3
	RESPIRABLE FRACTION: 5 MG/M3	RESPIRABLE FRACTION: 3 MG/M3
BARIUM SULFATE	PARTICULATES NOT OTHERWISE CLASSIFIED	PARTICULATES NOT OTHERWISE CLASSIFIED
	TOTAL DUST: 15 MG/M3	TOTAL DUST: 10 MG/M3
	RESPIRABLE FRACTION: 5 MG/M3	RESPIRABLE FRACTION: 3 MG/M3
MICA	6 MG/M3	3 MG/M3

SILICA	6 MG/M3	10 MG/M3
STANNOUS OCTOATE	.1 MG/M3	.1 MG/M3
SILICONE	NOT REGULATED	NOT REGULATED
PIGMENT	NOT REGULATED	NOT REGULATED

DURING THE USE OF THIS PRODUCT ON FIRES, EXHAUST GASES AND PRODUCTS OF INCOMPLETE COMBUSTION ARE THE MAIN RESPIRATORY HAZARDS. IN THE MANUFACTURE OF THIS PRODUCT, EMPLOYERS AND EMPLOYEES MUST USE THEIR COLLECTIVE JUDGMENT IN DETERMINING THE ON-THE-JOB SETTINGS WHERE THE USE OF A DUST MASK OR RESPIRATOR IS PRUDENT. THE NEED FOR RESPIRATORY PROTECTION IS NOT LIKELY FOR SHORT-TERM USE IN WELL-VENTILATED AREAS.

RESPIRATORY PROTECTION:

USE AN N-95 DUST MASK FOR LIMITED EXPOSURES AND USE AIR-PURIFYING RESPIRATORS WITH HIGH EFFICIENCY PARTICULATE AIR FILTERS (HEPA FILTERS) FOR PROLONGED EXPOSURES.

EYE PROTECTION:

WEAR CHEMICAL GOGGLES OR FULL-FACE AIR-PURIFYING RESPIRATOR.

SKIN PROTECTION:

USE NITRILE, LATEX, OR SIMILAR GLOVES AND COVERALLS. GOOD PERSONAL HYGIENE PRACTICES ARE ESSENTIAL. AFTER HANDLING THE PRODUCT, AVOID FOOD, TOBACCO PRODUCTS, OR OTHER MEANS OF TRANSFERRING THE PRODUCT FROM HAND TO MOUTH UNTIL AFTER THOROUGHLY WASHING.

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES



APPEARANCE AND ODOR: LIGHT YELLOW FINE POWDER THAT IS ODORLESS.

APPARENT DENSITY: 0.82

SOLUBILITY:

THE PRODUCT IS COATED WITH WATER REPELLANT SILICONE. NOT IMMEDIATELY SOLUBLE IN WATER.

PH: APPROXIMATELY 4 -5

FLASH POINT: N/A

FLAMMABILITY: N/A

VAPOR PRESSURE: N/A

BOILING POINT: N/A

EXPLOSIVE OR OXIDIZING PROPERTIES: NONE

SECTION X. STABILITY AND REACTIVITY



STABILITY: STABLE

INCOMPATIBLES:

MAGNESIUM, STRONG OXIDIZERS SUCH AS CALCIUM HYPOCHLORITE (POOL CHLORINE), STRONG ALKALIS, AND ISOCYANURIC ACIDS.

DECOMPOSITION PRODUCTS:

THIS PRODUCT MAY DECOMPOSE IN FIRE AND RELEASE CARBON MONOXIDE, CARBON DIOXIDE, AND SULFUR DIOXIDE. OXIDES OF PHOSPHOROUS AND AMMONIA HAVE BEEN REPORTED.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

HAZARDOUS REACTIONS: NONE

SECTION XI. TOXICOLOGICAL INFORMATION



ACUTE TOXICITY:

MONOAMMONIUM PHOSPHATE LD50 (RAT): >1000 MG/KG BODY WEIGHT.

TARGET ORGANS IN HUMANS:

RESPIRATORY SYSTEM, EYES, AND SKIN. THIS PRODUCT IS AN IRRITANT TO EPITHELIAL TISSUE AND MAY AGGRAVATE DERMATITIS. NO INDICATION THAT THE PRODUCT CAUSES SENSITIZATION.

CHRONIC TOXICITY:

PNEUMOCONIOSIS, OR "DUSTY LUNG" DISEASE, MAY RESULT FROM CHRONIC EXPOSURE TO ANY DUST.

REPRODUCTIVE TOXICITY:

THIS PRODUCT IS NOT KNOWN TO HAVE ANY REPRODUCTIVE EFFECTS.

SECTION XII. ECOLOGICAL INFORMATION



ECOTOXICITY:

NEGATIVE EFFECTS ARE UNKNOWN. PROVIDES NUTRIENT NITROGEN AND PHOSPHOROUS TO PLANT LIFE.

DEGRADABILITY: DEGRADES RAPIDLY IN WET OR HUMID ENVIRONMENT.

BIOACCUMULATION: UNKNOWN EXTENT.

MOBILITY IN SOIL: WATER-SOLUBLE. MAY LEECH IN TO GROUNDWATER.

SECTION XIII. DISPOSAL CONSIDERATION



THIS PRODUCT IS NOT A RCRA CHARACTERISTICALLY HAZARDOUS OR LISTED HAZARDOUS WASTE. DISPOSE OF ACCORDING TO STATE OR LOCAL LAWS, WHICH MAY BE MORE RESTRICTIVE THAN FEDERAL REGULATIONS. BE AWARE THAT PRODUCT USED ON A FIRE MAY BE ALTERED OR CONTAMINATED AND THEREBY REQUIRE DIFFERENT DISPOSAL CONSIDERATIONS.

SECTION XIV. TRANSPORTATION INFORMATION



THIS PRODUCT IS NOT DEFINED AS A HAZARDOUS MATERIAL UNDER U.S. DEPARTMENT OF TRANSPORTATION 49 CFR 172, OR BY TRANSPORT CANADA "TRANSPORTATION OF DANGEROUS GOODS" REGULATIONS.

PLEASE NOTE:

ALTHOUGH THIS MATERIAL IS NOT CONSIDERED HAZARDOUS, WHEN CONTAINED IN A STORED PRESSURE FIRE EXTINGUISHER PRESSURIZED WITH A NONFLAMMABLE GAS, THE EXTINGUISHER ITSELF IS CONSIDERED A HAZARDOUS MATERIAL BY THE U.S. DEPARTMENT OF TRANSPORTATION (USDOT) AND TRANSPORT CANADA (TC). THE PROPER SHIPPING NAME SHALL BE FIRE EXTINGUISHER AND THE UN IDENTIFICATION NUMBER IS UN 1044. THE USDOT HAZARD CLASS IS LIMITED QUANTITY WHEN PRESSURIZED TO LESS THAN 241 PSIG AND WHEN SHIPPED VIA HIGHWAY OR RAIL. USE CLASS 2.2, NON-FLAMMABLE GAS, WHEN SHIPPING VIA AIR.

SECTION XV. REGULATORY INFORMATION



INTERNATIONAL INVENTORY STATUS:

ALL INGREDIENTS ARE ON THE FOLLOWING INVENTORIES

COUNTRY	AGENCY
U.S.A.	TSCA
CANADA	DSL
EUROPE	EINECS/ELINCS
AUSTRALIA	AICS
JAPAN	MITI
SOUTH KOREA	KECL

EUROPEAN RISK AND SAFETY PHRASES:

EU CLASSIFICATION: HARMFUL

R PHRASES:

22: HARMFUL IF SWALLOWED

36/37/38: IRRITATING TO EYES, RESPIRATORY SYSTEM, AND SKIN.

S PHRASES:

26:

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE

36: WEAR SUITABLE PROTECTIVE CLOTHING

U.S. FEDERAL REGULATORY INFORMATION:

NONE OF THE CHEMICALS IN THIS PRODUCT ARE UNDER SARA REPORTING REQUIREMENTS OR HAVE SARA THRESHOLD PLANNING QUANTITIES OR CERCLA REPORTABLE QUANTITIES, OR ARE REGULATED UNDER TSCA 8(D).

STATE REGULATORY INFORMATION:

CHEMICALS IN THIS PRODUCT ARE COVERED UNDER THE SPECIFIC STATE REGULATIONS NOTED:

ALASKA:

DESIGNATED TOXIC AND HAZARDOUS SUBSTANCES: NONE

CALIFORNIA:

PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS: NONE

FLORIDA:

SUBSTANCE LIST: MICA DUST

ILLINOIS:

TOXIC SUBSTANCE LIST: NONE

KANSAS:

SECTION 302/303 LIST: NONE

MASSACHUSETTS:

SUBSTANCE LIST: MICA DUST

MINNESOTA:

LIST OF HAZARDOUS SUBSTANCES: NONE

MISSOURI:

EMPLOYER INFORMATION/TOXIC SUBSTANCE LIST: NONE

NEW JERSEY:

RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST: NONE

NORTH DAKOTA:

LIST OF HAZARDOUS CHEMICALS, REPORTABLE QUANTITIES: NONE

PENNSYLVANIA:

HAZARDOUS SUBSTANCE LIST: NONE

RHODE ISLAND:

HAZARDOUS SUBSTANCE LIST: MICA DUST

TEXAS:

HAZARDOUS SUBSTANCE LIST: NO

WEST VIRGINIA:

HAZARDOUS SUBSTANCE LIST: NONE

WISCONSIN:

TOXIC AND HAZARDOUS SUBSTANCES: NONE

CALIFORNIA PROPOSITION 65:

NO COMPONENT IS LISTED ON THE CALIFORNIA PROPOSITION 65 LIST

SECTION XVI. OTHER INFORMATION



THIS SAFETY DATA SHEET PREPARED IN ACCORDANCE WITH OSHA'S HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) AND THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)

HMIS RATINGS:

HEALTH

1

FLAMMABILITY

0

REACTIVITY

0

PERSONAL PROTECTIVE EQUIPMENT USE N-95 DUST MASK (SEE SECTION 8)

WHMIS (CANADIAN WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION):

D2B: MAY IRRITATE EYES, MUCOUS MEMBRANES, AND/OR SKIN

THE INFORMATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT SPECIFICATIONS. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE.



SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: ABC Dry Chemical Fire Extinguishant
 Other Identifiers: Multi-purpose Dry Chemical
 Product Code(s): CH555, F13, F11
 Model Code(s) of Extinguishers: 402, IS 18ABC, IS35ABC, IS 45ABC, 13ABC, V25ABC, VH25ABC, V30ABC, VH30ABC, V50ABC, VS50ABC, VS75ABC, V250ABC
 Recommended Use: Fire suppression, not for human or animal drug use.
 Manufacturer: AMEREX CORPORATION
 Internet Address: www.amerex-fire.com
 Address: 7595 Gadsden Highway, P.O. Box 81
 Trussville, AL 35173-0081
 Company Telephone: (205) 655-3271
 E-mail Address: info@amerex-fire.com
 Emergency Contacts: Chemtrec 1(800) 424-9300 or (703) 527-3887
 Revised: March 13, 2018

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Category 5	None	None
Skin Corrosion/Irritation: Category 3	None	None
Skin Sensitization: NO	None	None
Eye: Category 2A	None	Warning
STOT – Category 3	None	Warning
Carcinogen: Category None	None	None

GHS – Label Symbol(s):

If Pressurized: Gas Under Pressure

GHS – Words(s): Warning

Other Hazards Not Resulting in Classification: Mica may contain small quantities of quartz (crystalline silica). Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling

lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of crystalline silica in humans. In the case of normal use of this product, exposure to silica should be nil.

The attapulgite clay used in this product has a fiber length of less than 5µm; therefore, the clay is not considered to be carcinogenic in animals or humans.

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	H229	*- Contents under pressure; may explode if heated.
Health	H303 315 319 335	May be harmful if swallowed Causes skin irritation Causes serious eye irritation May cause respiratory irritation
Environmental	None	
Precautionary:		
General	P101	If medical advice is needed, have product container or label at hand
Prevention	P251 261 264 280	Do not pierce or burn, even after use. Avoid breathing dust/fumes/gas/mist/vapours/spray. Wash exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	P312 321 362 302+352 304+340 305+351+338 332+313 342+311 337+313	Call a doctor if you feel unwell. Specific treatment (see Section 4. First Aid Measures) Take off contaminated clothing. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If skin irritation occurs: Get medical advice/attention. If experiencing respiratory symptoms: Call a doctor. If eye irritation persists get medical advice/attention.
Storage	P410 +403	*- Protect from sunlight. Store in well-ventilated place.
Disposal	P501	Dispose of contents through a licensed disposal company. Contaminated container should be disposed of as unused product.

*- If under pressure

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %	Classification
Mono-ammonium phosphate	231-764-5	01-2119488166-29	7722-76-1	80-98	NA
Attapulgite clay	601-805-5	Not Available	12174-11-7	3-16	NA
Mica-potassium aluminum silicate	310-1276	Not Available	12001-26-2	1-2	NA
Silicone oil methyl hydrogen polysiloxane	613-152-3	Not Available	63148-57-2	<1	NA
Calcium carbonate	207-439-9	Not Available	1317-65-3	<1	NA
Amorphous silica precipitated synthetic zeolite	231-545-4	01-2119379499-16-0036	7631-86-9	<1	NA
Yellow 14 pigment – di-azo dye	226-789-3	Not Available	5468-75-7	<1	NA

Emergency overview:

Adverse health effects and symptoms:

Light yellow, fine solid powder, odorless.

Mild irritant to the respiratory system. Irritant to eyes, and skin. Symptoms may include coughing,

shortness of breath, and irritation of the lungs, eyes, and skin. Ingestion, although unlikely, may cause cramps, nausea and diarrhea.

Section 4. FIRST AID MEASURES

Eye Exposure:	May cause irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention if irritation develops, or if vision changes occur.
Skin Exposure:	May cause skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.
Inhalation:	May cause irritation, along with coughing. If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if irritation persists.
Ingestion:	Overdose symptoms may include numbness or tingling in hands or feet, uneven heart rate, paralysis, feeling faint, chest pain or heavy feeling, pain spreading to the arm or shoulder, nausea, diarrhea, sweating, general ill feeling, or seizure (convulsions). If victim is conscious and alert, give 2-3 glasses of water to drink. If conscious, do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.
Medical conditions possibly aggravated by exposure:	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis ("dusty lung" disease).

Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined
Suitable Extinguishing Media:	Non-combustible. Use extinguishing media suitable for surrounding conditions.
Hazardous Combustion Products:	Carbon oxides

Explosion Data:

Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	In a fire this material may decompose, releasing oxides of carbon, potassium and nitrogen (see Section 10).
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand. NIOSH (approved or equivalent) and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes, and clothing.
Personal Protective Equipment:	Minimum - safety glasses, gloves, and a dust respirator.
Emergency Procedures:	NA
Methods for Containment:	Prevent further leakage or spillage if safe to do so.
Methods for Clean Up:	Avoid dust formation; clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Bag and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.
Other:	If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

Section 7. HANDLING AND STORAGE

Personal Precautions:	Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8).
Conditions for Safe Storage:	Keep product in original container or extinguisher. Contents may be under pressure – inspect for extinguisher rust periodically to ensure container integrity.
Incompatible Products:	Do not mix with other extinguishing agents, particularly potassium bicarbonate and sodium bicarbonate. Incompatible with strong oxidizing agents and strong acids. Do not store in high humidity. Do not combine with chlorine compounds.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Mono-ammonium phosphate	PNOC** Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	PNOC Total dust, 4 mg/m ³ Respirable fraction, 1.5 mg/m ³	NA
Mica	6 mg/m ³	3 mg/m ³	-----	NA
Attapulgite clay	PNOC** Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	PNOC Total dust, 4 mg/m ³ Respirable fraction, 1.5 mg/m ³	
Silicone oil	NR**	NR		
Calcium carbonate	PNOC Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	-----	NA
Amorphous silica	20mppcf 80 mg/m ³ or % SiO ₂	10 mg/m ³	4 mg/m ³	NA
Yellow 14 pigment	NR	NR	NR	NA

*German regulatory limits **PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) *** NR = Not Regulated. All values are 8 hour time weighted average concentrations.

Engineering Controls:

Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment – PPE Code E:

The need for respiratory protection is not probable during short-term exposure. During production, the manufacturer should use judgement concerning the need for PPE.



Eye/Face Protection:
Skin and Body Protection:
Respiratory Protection:

Tightly fitting safety goggles
Wear protective gloves/coveralls
If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Use P100 respirators for limited exposure. Use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged

exposure. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. The need for respiratory protection is not likely for short-term use in well ventilated areas.

Hygiene Measures:

Good personal hygiene practices essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow powder, finely divided odorless solid
Molecular Weight:	NH ₄ H ₂ PO ₄ : 115.03
Odor:	Odorless
Odor Threshold:	No information available
Decomposition Temperature °C:	100 - 120
Freezing Point °C:	No information available
Initial Boiling Point °C:	No information available
Physical State:	Crystalline Powder
pH:	Approximately 4.4 to 4.9
Flash Point °C:	None
Autoignition Temperature °C:	None
Boiling Point/Range °C:	No information available
Melting Point/Range °C:	NH ₄ H ₂ PO ₄ : 190
Flammability/Explosion Limits in Air °C:	Upper – None; Lower-None
Explosive Properties:	None
Oxidizing Properties:	None
Volatile Component (%vol)	Not applicable
Evaporation Rate:	No information available
Vapor Density:	No information available
Vapor Pressure:	NH ₄ H ₂ PO ₄ : 1.41 mm/Hg
Specific gravity at 25 °C:	NH ₄ H ₂ PO ₄ : 1.80
Solubility:	40.4 g/100 ml
Partition Coefficient:	NH ₄ H ₂ PO ₄ Est: -4.11
Viscosity:	No information available

NOTE: NH₄H₂PO₄ – Monoammonium Phosphate

Section 10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage and handling conditions.
Incompatibles:	Strong oxidizing agents; Strong acids; sodium hypochlorite and chlorine compounds. Protect from moisture
Conditions to Avoid:	Storage or handling near incompatibles.
Hazardous Decomposition Products:	Carbon, nitrogen, and potassium oxides. Heat of fire may release carbon monoxide.
Possibility of Hazardous Reactions:	None
Hazardous Polymerization	Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation, skin and eye contact.
Symptoms:	
Inhalation:	Irritation, coughing.
Eyes:	Irritation.
Skin:	Irritation.
Acute Toxicity:	Relatively non-toxic.
Chronic Toxicity:	
Short-term Exposure:	None known.
Long-term Exposure:	As with all dusts, pneumoconiosis, or "dusty lung" disease, may result from chronic exposure.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Mono-ammonium phosphate	5750 mg/kg (rat)	>7940 mg/kg (rabbit)	Not available
Mica	None	None	None
Attapulgite clay	None	None	None
Silicone oil	None	None	None
Calcium carbonate	6450 mg/kg (rat)	500 mg/24 hr (rabbit)	Not available
Amorphous silica	>5000 mg/kg (rat)	>2000 mg/kg (rabbit)	>2.2 mg/L (rat)
Yellow 14 pigment	>17000 mg/kg (rat)	>3000 mg/kg (rat)	>4448 mg/m3 (rat)

Reproductive Toxicity:	This product's ingredients are not known to have reproductive or teratogenic effects.
Target Organs and Effects (TOST):	Respiratory system (mild irritant). This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. No information was found indicating the product causes sensitization.

Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcinogenicity	Reproductive	TOST Single Exp	TOST Repeated Exp	Aspiration
Mono-ammonium phosphate	None	None	None	Cat 3	None	None
Attapulgite clay	None	None	None	None	None	None
Mica	None	None	None	None	None	None
Silicone oil	None	None	None	None	None	None
Calcium carbonate	None	None	None	None	None	None
Amorphous silica	None	None	None	None	None	None
Yellow 14 pigment	None	None	None	None	None	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:	Negative effects unknown. Provides nutrient nitrogen and phosphorus to plant life.
Persistence/Degradability:	Degrades rapidly in humid/wet environment.
Probability of rapid biodegradation:	NH ₄ H ₂ PO ₄ Est: 0.693 (Rapid); (NH ₄) ₂ SO ₄ : Est: 0.684 (Rapid)
Anaerobic biodegradation probability:	NH ₄ H ₂ PO ₄ Est: 0.398 (Slow); (NH ₄) ₂ SO ₄ : Est: 0.398 (Slow)
Bioaccumulation potential:	Low.
Bioconcentration factor:	NH ₄ H ₂ PO ₄ : 3.16 L/kg (wet weight) (Low BCF)
Bioaccumulation factor:	NH ₄ H ₂ PO ₄ : 63.04 L/kg (wet weight)
Mobility in soil:	Slow evaporation rate; water soluble, may leach to groundwater
Log Koc:	NH ₄ H ₂ PO ₄ Est: -1.25
Log Koa:	NH ₄ H ₂ PO ₄ Est: 16.72
Log Kaw:	NH ₄ H ₂ PO ₄ Est: -20.86
NOTE: NH ₄ H ₂ PO ₄ – Mono-ammonium Phosphate	

Other Adverse Ecological Effects: No other known effects at this time

Aquatic Toxicity Values – Environment – Research

Chemical Name	Acute (LC50)	Chronic (LC50)
Mono-ammonium phosphate	N/A	N/A
Mica	N/A	N/A
Attapulgite clay	N/A	N/A
Silicone oil	N/A	N/A
Calcium carbonate	N/A	N/A
Amorphous silica	N/A	N/A
Yellow 14 pigment	N/A	N/A

Aquatic Toxicity Values – Environment – Estimates

Chemical Name	Acute (LC50)	EC50
Mono-ammonium phosphate	2,91e+07 mg/L Fish 96 hr; 9.4e+06 mg/l Daphnid 48 hr;	6.70e+05 mg/L Gr. Algae 96 hr
Mica	N/A	N/A
Attapulgite clay	N/A	N/A
Silicone oil	N/A	N/A
Calcium carbonate	N/A	N/A
Amorphous silica	N/A	N/A
Yellow 14 pigment	N/A	N/A

Section 13. DISPOSAL CONSIDERATIONS

Safe Handling

Use appropriate PPE when handling, and wash thoroughly after handling (see Section 8).

Waste Disposal Considerations

Dispose in accordance with federal, state, and local regulations.

Contaminated Packaging

Dispose in accordance with federal, state, and local regulations.

NOTES:

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

Section 14. TRANSPORT INFORMATION

UN Number: NA
 UN Proper Shipping Name: NA
 Transport Hazard Class: NA
 Packing Group: NA
 Marine Pollutant?: NO

IATA Not regulated

DOT Not regulated

NOTES:

This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada "Transportation of Dangerous Goods" regulations.

Special Precautions for Shipping:

The transportation information above covers the ABC 555 dry chemical extinguisher agent as shipped in bulk containers and not when contained in fire extinguishers or fire extinguisher systems. If shipped in a stored pressure-type fire extinguisher, and pressurized with a non-flammable, non-toxic

inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class/division is LIMITED QUANTITY when pressurized to less than 241 psig and when shipped via highway or rail. UN Class 2.2. Non-Flammable Gas, when shipping via air. Packing Group – N/A

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

REACH Title XVII Restrictions: No information available

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on Label	Pollution Release and Transfer Registry (Class II)	Pollution Release and Transfer Registry (Class I)	Poison and Deleterious Substances Control Law
Monoammonium Phosphate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Component	ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA – Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) – Toxic Chemicals	Toxic Release Inventory (TRI) – Group I	Toxic Release Inventory (TRI) – Group II
Monoammonium Phosphate 7722-76-1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Attapulgitte clay 12174-11-7 (>3)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Mica-potassium aluminum silicate 120001-26-2 (>2)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium carbonate 471-34-1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Amorphous silica 69012-64-2	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Yellow 14 pigment 5468-75-7	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

European Risk and Safety phrases:

EU Classification:	Xn - Irritant	
R Phrases:	20	Harmful by inhalation.
	36/37/38	Irritating to eyes, respiratory system and skin.
S Phrases:	22	Do not breath dust.
	24/25	Avoid contact with skin and eyes
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

U.S. Federal Regulatory Information:

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) - This product does not contain and chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

SARA 311/312 Hazard Categories:

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
*-Sudden Release of Pressure Hazard	Yes
Reactive Hazard	No

* - Only applicable if material is in a pressurized extinguisher.

Clean Water/Clean Air Acts:

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) or Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) and Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulatory Information:

Chemicals in this product are covered under specific State regulations, as denoted below:

- Alaska** - Designated Toxic and Hazardous Substances: None
- California** – Permissible Exposure Limits for Chemical Contaminants: None
- Florida** – Substance List: Mica Dust
- Illinois** – Toxic Substance List: None
- Kansas** – Section 302/303 List: None
- Massachusetts** – Substance List: Mica Dust

Minnesota – List of Hazardous Substances: None
Missouri – Employer Information/Toxic Substance List: None
New Jersey – Right to Know Hazardous Substance List: None
North Dakota – List of Hazardous Chemicals, Reportable Quantities: None
Pennsylvania – Hazardous Substance List: None
Rhode Island – Hazardous Substance List: Mica Dust
Texas – Hazardous Substance List: No
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

Other:

Mexico – Grade	No component listed
Canada – WHMIS Hazard Class	No component listed

Section 16. OTHER INFORMATION

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

Issuing Date	17-June-2012
Revision Date	13-March-2018
Revision Notes	None

The information herein is given in good faith but no warranty, expressed or implied, is made.
 Updated by William F. Garvin, CIH.

11/10/2020

AEROKROIL

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	AEROKROIL
Product Use:	Penetrant/Lubricant for Industrial Use
Manufacturer:	Kano Laboratories, Inc., 1000 E. Thompson Lane Nashville, TN 37211
Emergency Phone Number:	Chemtrec 1 (800) 424-9300
Manufacturer Phone Number:	615-833-4101
Website:	www.kroil.com
SDS Date of Preparation:	November 10, 2020

SECTION 2: HAZARDS IDENTIFICATION

GHS / HAZCOM 2012 Classification:

HEALTH	PHYSICAL
Skin Irritation Category 2 Eye Irritation Category 2A Aspiration Hazard Category 1 Skin Sensitization Category 1	Flammable Aerosol Category 2 Gas Under Pressure: Compressed Gas

Label Elements

DANGER!

Flammable aerosol.

Contains gas under pressure: may explode if heated. Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May be fatal if swallowed and enters airways.

Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Do not spray on an open flame or other ignition source.

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

Wash thoroughly after handling.

Contaminated clothing must not be allowed out of the workplace.

Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

Take off contaminated clothing and wash it before reuse.

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.

In case of fire: Use carbon dioxide, dry chemical or foam to extinguish. Protect from sunlight.

Do not expose to temperatures exceeding 50°C/122°F.

Store locked up.

Dispose of contents and container in accordance with local and national regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS#	%
Severely Hydrotreated Petroleum Distillates	64742-52-5 64742-53-6	30-50
LVP Aliphatic Hydrocarbon	64742-47-8	20-40
Proprietary Additive	Proprietary	5-15
Diisobutyl Ketone	108-83-8	5-15
Aliphatic Alcohol #1	123-42-2	1 - <3
Aliphatic Alcohol #2	78-83-1	1 - <3
Carbon Dioxide Propellant	124-38-9	1-5

The exact percentage has been withheld as a trade secret or is a variation in formula.

SECTION 4: FIRST AID MEASURES

EYE: Rinse thoroughly with water for several holding the eye lids open to be sure the material is washed out. Get medical attention if irritation develops or persists.

SKIN: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. Launder clothing before re-use.

INHALATION: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention if symptoms develop.

INGESTION: DO NOT induce vomiting. Keep the victim calm and warm. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED: May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects such as headache, dizziness, nausea and vomiting. Harmful or fatal if swallowed. Aspiration into the lungs during ingestion or vomiting may cause lung damage. May cause an allergic skin reaction.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: If swallowed, get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA: Use carbon dioxide, dry chemical or foam. Water may be ineffective but can be used to cool containers and structures.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Contents under pressure. Keep away from heat and open flames. Container may rupture or explode in the heat of a fire. Prolonged exposure to temperatures above 120oF may cause cans to burst. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

Never use welding or cutting torch on or near containers (even empty) because product can ignite explosively. Combustion products may be hazardous: Oxides of carbon, organic compounds, smoke and fumes.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Wear NIOSH approved positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water. Protect against bursting cans.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES: Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed. Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Ventilate the area with explosion-proof equipment.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Report spills and releases as required to appropriate authorities.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Place leaking can in a pail or pan in a well-ventilated area until the pressure has been released. Cover liquid with an inert absorbent material and collect into an appropriate container for disposal.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash exposed skin thoroughly with soap and water after use. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Do not cut, braze, solder, grind or weld on or near containers. Contents under pressure. Do not puncture or incinerate container.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store in a cool, well ventilated area at temperatures below 120°F. Do not store in direct sunlight. Store as a Level 3 aerosol.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

CHEMICAL NAME	EXPOSURE LIMITS
Severely Hydrotreated Petroleum Distillates (as mineral oil)	5 mg/m ³ TWA OSHA PEL (as oil mist) 5 mg/m ³ TWA ACGIH TLV (inhalable fraction)
LVP Aliphatic Hydrocarbon	166 ppm TWA Manufacturer Recommended (vapor)
Proprietary Additive	None Established
Diisobutyl Ketone	50 ppm TWA OSHA PEL 25 ppm TWA ACGIH TLV
Aliphatic Alcohol #1	50 ppm OSHA TWA PEL 50 ppm TWA ACGIH TLV
Aliphatic Alcohol #2	100 ppm TWA OSHA PEL 50 ppm TWA ACGIH TLV
Carbon Dioxide Propellant	5000 ppm TWA OSHA PEL 5000 ppm TWA ACGIH TLV 30000 ppm STEL ACGIH TLV

APPROPRIATE ENGINEERING CONTROLS: Use with adequate general or local exhaust ventilation to maintain concentrations below the occupational exposure limits. Use explosion proof electrical equipment and wiring where required.

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION: If the exposure limits listed above are exceeded, a NIOSH approved respirator with organic vapor cartridges may be used. For higher exposures, a supplied air respirator may be required. 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.

HAND PROTECTION: Impervious gloves are recommended when needed to avoid skin contact.

EYE PROTECTION: Chemical safety goggles recommended.

SKIN PROTECTION: Impervious clothing as required to prevent skin contact and contamination of personal clothing.

HYGIENE MEASURES: Suitable eye wash and washing facilities should be available in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Slightly reddish liquid packaged as an aerosol	Odor:	Solvent
Odor Threshold:	Not available	pH:	Not available
Melting/Freezing Point:	Not available	Boiling Point/Range:	Not available
Flash Point:	132°F (55.5°C) TOC	Evaporation Rate:	Not available
Flammability: (Solid, Gas)	Not applicable	Flammability Limits:	10.9% (aliphatic alcohol #2) LEL: 0.7% (petroleum distillates)
Vapor Pressure:	Not available	Vapor Density:	Not available
Relative Density:	0.8596	Solubilities:	Negligible in Water
Partition Coefficient: (N-Octanol/Water)	Not available	Autoignition Temperature:	Not available
Decomposition Temperature:	Not available	Viscosity:	Not available

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: None known.

CHEMICAL STABILITY: Stable under normal conditions of storage or use.

POSSIBILITY OF HAZARDOUS REACTIONS: None known.

CONDITIONS TO AVOID: Avoid heat, sparks, flames and all other sources of ignition.

INCOMPATIBLE MATERIALS: Avoid strong oxidizing agents, reducing agents, acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will produce oxides of carbon, acetone, acrid fumes and smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS:

EYE: May cause eye irritation with redness, tearing and stinging.

SKIN: May cause irritation with redness, rash, swelling. Prolonged or repeated contact may result in defatting and dermatitis. Repeated skin contact may cause sensitization (allergic skin reaction) in some individuals.

INHALATION: Inhalation of vapors or mists may cause mucous membrane and upper respiratory tract irritation and central nervous system depression. Symptoms may include coughing, wheezing, shortness of breath, headache, dizziness, drowsiness, nausea, fatigue and unconsciousness.

INGESTION: Ingestion is an unlikely route of exposure for aerosol products. Swallowing may cause gastrointestinal irritation with abdominal pain, nausea, vomiting and diarrhea and central nervous system depression with symptoms including headache, dizziness, intoxication, weakness, nausea, and vomiting. Aspiration into the lungs during ingestion or vomiting may cause lung damage.

CHRONIC HAZARDS: Aliphatic Alcohol #1 is suspected of damaging fertility or the unborn child.

CARCINOGEN STATUS: None of the components of this product at greater than 0.1% are listed as carcinogens by OSHA, IARC or NTP.

ACUTE TOXICITY: Toxicological testing has not been performed on this product as a mixture.

LVP Aliphatic Hydrocarbon: Oral rat LD50 > 5000 mg/kg; Dermal rat LD50 > 5000 mg/kg; Inhalation rat LC50 > 2.18 mg/L/4 hr.

Severely Hydrotreated Petroleum Distillates: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >5.28 mg/L/4 hr, Dermal rabbit LD50 >2000 mg/kg

Proprietary Additive: Oral rat LD50 3200 mg/kg; Dermal rabbit LD50 5000 mg/kg

Diisobutyl Ketone: Oral rat LD50 5233 mg/kg; Dermal rat LD50 > 2000 mg/kg; Inhalation rat LC50 14.5 mg/L/4 hr.

Aliphatic Alcohol #1: Oral rat LD50 3002 mg/kg; Dermal rat LD50 > 1875 mg/kg; Inhalation rat LC50 > 7.6 mg/L/4 hr.

Aliphatic Alcohol #2: Oral rat LD50 > 2830 mg/kg; Inhalation rat LC50 24.6 mg/L/4 hr; Dermal rabbit LD50 > 2000 mg/kg

Carbon Dioxide: Inhalation rat LC50 167857 ppm/4 hr

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: No toxicity data available for the product.

LVP Aliphatic Hydrocarbon: 96 hr. LC50 Pimephales promelas > 100 mg/L; 48 hr. EC50 daphnia magna >1000 mg/L; 72 hr.

EC50 Pseudokirchnerella subcapitata > 100 mg/L

Severely Hydrotreated Petroleum Distillates: 96 hr LL50 Oncorhynchus mykiss 2.5 mg/kg, 48 hr EL50 daphnia magna 1.4 mg/L, 72 hr

EL50 Pseudokirchnerella subcapitata 1.3 mg/L

Proprietary Ingredient: 48 hr. LC50 daphnia magna 17-28 mg/L

Diisobutyl Ketone: 96 hr. LC50 Oncorhynchus mykiss 30 mg/L; 48 hr. EC50 daphnia magna 37.2 mg/L, 72 hr.

Aliphatic Alcohol #1: 96 hr. LC50 Oryzias latipes >100 mg/L; 48 hr. EC50 daphnia magna >1000 mg/L; 72 hr. EC50 Pseudokirchnerella subcapitata >1000 mg/L

Aliphatic Alcohol #2: 96 hr LC50 Pimephales promelas 1430 mg/L; 48 hr EC50 daphnia pulex 1100 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata 1799 mg/L

Carbon Dioxide: 96 hr LC50 Oncorhynchus mykiss 35 mg/L

PERSISTENCE AND DEGRADABILITY: Aliphatic Alcohol #1 and Aliphatic Alcohol #2 are readily biodegradable.

BIOACCUMULATIVE POTENTIAL: No data available.

MOBILITY IN SOIL: No data available

OTHER ADVERSE EFFECTS: None known

SECTION 13: DISPOSAL INFORMATION

DISPOSAL INSTRUCTIONS: Dispose of product in accordance with all local, state/provincial and federal regulations.

Do not puncture or incinerate.

CONTAMINATED PACKAGING: Offer empty packaging material to local recycling facilities.

SECTION 14: TRANSPORT INFORMATION

	UN NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PACKING GROUP	ENVIRONMENTAL HAZARD
DOT / 49 CFR GROUND		Limited Quantity			
DOT AIR	UN1950	Aerosols, Flammable, Limited Quantity	2.1	None	None
IMDG	UN1950	Aerosols, Limited Quantity	2.1	None	None
IATA	UN1950	Aerosols, Flammable, Limited Quantity	2.1	None	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable - product is transported only in packaged form.

Special precautions: None known.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:


CERCLA 103 Reportable Quantity: This product has a Reportable Quantity (RQ) of 166,666 lbs. (based on the RQ for Aliphatic alcohol #2 of 5,000 lbs present at 3%) maximum. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations

STATE REPORTING REGULATIONS:

Massachusetts Right To Know: Diacetone Alcohol 123-42-2, Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8, Carbon Dioxide 124-38-9

New Jersey Right To Know: Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8, Carbon Dioxide 124-38-9, Pine Oil 8002-09-3

Pennsylvania Right To Know: Diacetone Alcohol 123-42-2, Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8, Carbon Dioxide 124-38-9

California Proposition 65:  **WARNING:** This product can expose you to chemicals including beta-myrcene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

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.

Canadian DSL: All of the components of this product are listed on the Canadian Domestic Substances List

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health - 2 Flammability - 4 Physical Hazard - 0

NFPA RATINGS: Health - 1 Flammability - 2 Instability - 0

SDS REVISION HISTORY: Updated formulation - Section 15

DATE OF PREPARATION: November 20, 2020

DATE OF LAST REVISION: July 01, 2020

The information contained herein has been developed based upon current available scientific data. New information may be developed from time to time which may render the conclusions of this report obsolete. Therefore, no warranty is extended as to the applicability of this information to the user's intended purpose or the consequences of its use or misuse.

11/10/2020

AEROKROIL

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	AEROKROIL
Product Use:	Penetrant/Lubricant for Industrial Use
Manufacturer:	Kano Laboratories, Inc., 1000 E. Thompson Lane Nashville, TN 37211
Emergency Phone Number:	Chemtrec 1 (800) 424-9300
Manufacturer Phone Number:	615-833-4101
Website:	www.kroil.com
SDS Date of Preparation:	November 10, 2020

SECTION 2: HAZARDS IDENTIFICATION

GHS / HAZCOM 2012 Classification:

HEALTH	PHYSICAL
Skin Irritation Category 2 Eye Irritation Category 2A Aspiration Hazard Category 1 Skin Sensitization Category 1	Flammable Aerosol Category 2 Gas Under Pressure: Compressed Gas

Label Elements

DANGER!

Flammable aerosol.

Contains gas under pressure: may explode if heated. Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May be fatal if swallowed and enters airways.

Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Do not spray on an open flame or other ignition source.

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

Wash thoroughly after handling.

Contaminated clothing must not be allowed out of the workplace.

Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

Take off contaminated clothing and wash it before reuse.

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.

In case of fire: Use carbon dioxide, dry chemical or foam to extinguish. Protect from sunlight.

Do not expose to temperatures exceeding 50°C/122°F.

Store locked up.

Dispose of contents and container in accordance with local and national regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS#	%
Severely Hydrotreated Petroleum Distillates	64742-52-5 64742-53-6	30-50
LVP Aliphatic Hydrocarbon	64742-47-8	20-40
Proprietary Additive	Proprietary	5-15
Diisobutyl Ketone	108-83-8	5-15
Aliphatic Alcohol #1	123-42-2	1 - <3
Aliphatic Alcohol #2	78-83-1	1 - <3
Carbon Dioxide Propellant	124-38-9	1-5

The exact percentage has been withheld as a trade secret or is a variation in formula.

SECTION 4: FIRST AID MEASURES

EYE: Rinse thoroughly with water for several holding the eye lids open to be sure the material is washed out. Get medical attention if irritation develops or persists.

SKIN: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. Launder clothing before re-use.

INHALATION: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention if symptoms develop.

INGESTION: DO NOT induce vomiting. Keep the victim calm and warm. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED: May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects such as headache, dizziness, nausea and vomiting. Harmful or fatal if swallowed. Aspiration into the lungs during ingestion or vomiting may cause lung damage. May cause an allergic skin reaction.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: If swallowed, get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA: Use carbon dioxide, dry chemical or foam. Water may be ineffective but can be used to cool containers and structures.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Contents under pressure. Keep away from heat and open flames. Container may rupture or explode in the heat of a fire. Prolonged exposure to temperatures above 120oF may cause cans to burst. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

Never use welding or cutting torch on or near containers (even empty) because product can ignite explosively. Combustion products may be hazardous: Oxides of carbon, organic compounds, smoke and fumes.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Wear NIOSH approved positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water. Protect against bursting cans.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES: Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed. Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Ventilate the area with explosion-proof equipment.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Report spills and releases as required to appropriate authorities.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Place leaking can in a pail or pan in a well-ventilated area until the pressure has been released. Cover liquid with an inert absorbent material and collect into an appropriate container for disposal.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash exposed skin thoroughly with soap and water after use. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Do not cut, braze, solder, grind or weld on or near containers. Contents under pressure. Do not puncture or incinerate container.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store in a cool, well ventilated area at temperatures below 120°F. Do not store in direct sunlight. Store as a Level 3 aerosol.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

CHEMICAL NAME	EXPOSURE LIMITS
Severely Hydrotreated Petroleum Distillates (as mineral oil)	5 mg/m ³ TWA OSHA PEL (as oil mist) 5 mg/m ³ TWA ACGIH TLV (inhalable fraction)
LVP Aliphatic Hydrocarbon	166 ppm TWA Manufacturer Recommended (vapor)
Proprietary Additive	None Established
Diisobutyl Ketone	50 ppm TWA OSHA PEL 25 ppm TWA ACGIH TLV
Aliphatic Alcohol #1	50 ppm OSHA TWA PEL 50 ppm TWA ACGIH TLV
Aliphatic Alcohol #2	100 ppm TWA OSHA PEL 50 ppm TWA ACGIH TLV
Carbon Dioxide Propellant	5000 ppm TWA OSHA PEL 5000 ppm TWA ACGIH TLV 30000 ppm STEL ACGIH TLV

APPROPRIATE ENGINEERING CONTROLS: Use with adequate general or local exhaust ventilation to maintain concentrations below the occupational exposure limits. Use explosion proof electrical equipment and wiring where required.

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION: If the exposure limits listed above are exceeded, a NIOSH approved respirator with organic vapor cartridges may be used. For higher exposures, a supplied air respirator may be required. 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.

HAND PROTECTION: Impervious gloves are recommended when needed to avoid skin contact.

EYE PROTECTION: Chemical safety goggles recommended.

SKIN PROTECTION: Impervious clothing as required to prevent skin contact and contamination of personal clothing.

HYGIENE MEASURES: Suitable eye wash and washing facilities should be available in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Slightly reddish liquid packaged as an aerosol	Odor:	Solvent
Odor Threshold:	Not available	pH:	Not available
Melting/Freezing Point:	Not available	Boiling Point/Range:	Not available
Flash Point:	132°F (55.5°C) TOC	Evaporation Rate:	Not available
Flammability: (Solid, Gas)	Not applicable	Flammability Limits:	10.9% (aliphatic alcohol #2) LEL: 0.7% (petroleum distillates)
Vapor Pressure:	Not available	Vapor Density:	Not available
Relative Density:	0.8596	Solubilities:	Negligible in Water
Partition Coefficient: (N-Octanol/Water)	Not available	Autoignition Temperature:	Not available
Decomposition Temperature:	Not available	Viscosity:	Not available

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: None known.

CHEMICAL STABILITY: Stable under normal conditions of storage or use.

POSSIBILITY OF HAZARDOUS REACTIONS: None known.

CONDITIONS TO AVOID: Avoid heat, sparks, flames and all other sources of ignition.

INCOMPATIBLE MATERIALS: Avoid strong oxidizing agents, reducing agents, acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will produce oxides of carbon, acetone, acrid fumes and smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS:

EYE: May cause eye irritation with redness, tearing and stinging.

SKIN: May cause irritation with redness, rash, swelling. Prolonged or repeated contact may result in defatting and dermatitis. Repeated skin contact may cause sensitization (allergic skin reaction) in some individuals.

INHALATION: Inhalation of vapors or mists may cause mucous membrane and upper respiratory tract irritation and central nervous system depression. Symptoms may include coughing, wheezing, shortness of breath, headache, dizziness, drowsiness, nausea, fatigue and unconsciousness.

INGESTION: Ingestion is an unlikely route of exposure for aerosol products. Swallowing may cause gastrointestinal irritation with abdominal pain, nausea, vomiting and diarrhea and central nervous system depression with symptoms including headache, dizziness, intoxication, weakness, nausea, and vomiting. Aspiration into the lungs during ingestion or vomiting may cause lung damage.

CHRONIC HAZARDS: Aliphatic Alcohol #1 is suspected of damaging fertility or the unborn child.

CARCINOGEN STATUS: None of the components of this product at greater than 0.1% are listed as carcinogens by OSHA, IARC or NTP.

ACUTE TOXICITY: Toxicological testing has not been performed on this product as a mixture.

LVP Aliphatic Hydrocarbon: Oral rat LD50 > 5000 mg/kg; Dermal rat LD50 > 5000 mg/kg; Inhalation rat LC50 > 2.18 mg/L/4 hr.

Severely Hydrotreated Petroleum Distillates: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >5.28 mg/L/4 hr, Dermal rabbit LD50 >2000 mg/kg

Proprietary Additive: Oral rat LD50 3200 mg/kg; Dermal rabbit LD50 5000 mg/kg

Diisobutyl Ketone: Oral rat LD50 5233 mg/kg; Dermal rat LD50 > 2000 mg/kg; Inhalation rat LC50 14.5 mg/L/4 hr.

Aliphatic Alcohol #1: Oral rat LD50 3002 mg/kg; Dermal rat LD50 > 1875 mg/kg; Inhalation rat LC50 > 7.6 mg/L/4 hr.

Aliphatic Alcohol #2: Oral rat LD50 > 2830 mg/kg; Inhalation rat LC50 24.6 mg/L/4 hr; Dermal rabbit LD50 > 2000 mg/kg

Carbon Dioxide: Inhalation rat LC50 167857 ppm/4 hr

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: No toxicity data available for the product.

LVP Aliphatic Hydrocarbon: 96 hr. LC50 Pimephales promelas > 100 mg/L; 48 hr. EC50 daphnia magna >1000 mg/L; 72 hr.

EC50 Pseudokirchnerella subcapitata > 100 mg/L

Severely Hydrotreated Petroleum Distillates: 96 hr LL50 Oncorhynchus mykiss 2.5 mg/kg, 48 hr EL50 daphnia magna 1.4 mg/L, 72 hr

EL50 Pseudokirchnerella subcapitata 1.3 mg/L

Proprietary Ingredient: 48 hr. LC50 daphnia magna 17-28 mg/L

Diisobutyl Ketone: 96 hr. LC50 Oncorhynchus mykiss 30 mg/L; 48 hr. EC50 daphnia magna 37.2 mg/L, 72 hr.

Aliphatic Alcohol #1: 96 hr. LC50 Oryzias latipes >100 mg/L; 48 hr. EC50 daphnia magna >1000 mg/L; 72 hr. EC50 Pseudokirchnerella subcapitata >1000 mg/L

Aliphatic Alcohol #2: 96 hr LC50 Pimephales promelas 1430 mg/L; 48 hr EC50 daphnia pulex 1100 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata 1799 mg/L

Carbon Dioxide: 96 hr LC50 Oncorhynchus mykiss 35 mg/L

PERSISTENCE AND DEGRADABILITY: Aliphatic Alcohol #1 and Aliphatic Alcohol #2 are readily biodegradable.

BIOACCUMULATIVE POTENTIAL: No data available.

MOBILITY IN SOIL: No data available

OTHER ADVERSE EFFECTS: None known

SECTION 13: DISPOSAL INFORMATION

DISPOSAL INSTRUCTIONS: Dispose of product in accordance with all local, state/provincial and federal regulations.

Do not puncture or incinerate.

CONTAMINATED PACKAGING: Offer empty packaging material to local recycling facilities.

SECTION 14: TRANSPORT INFORMATION

	UN NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PACKING GROUP	ENVIRONMENTAL HAZARD
DOT / 49 CFR GROUND		Limited Quantity			
DOT AIR	UN1950	Aerosols, Flammable, Limited Quantity	2.1	None	None
IMDG	UN1950	Aerosols, Limited Quantity	2.1	None	None
IATA	UN1950	Aerosols, Flammable, Limited Quantity	2.1	None	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable - product is transported only in packaged form.

Special precautions: None known.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:


CERCLA 103 Reportable Quantity: This product has a Reportable Quantity (RQ) of 166,666 lbs. (based on the RQ for Aliphatic alcohol #2 of 5,000 lbs present at 3%) maximum. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations

STATE REPORTING REGULATIONS:

Massachusetts Right To Know: Diacetone Alcohol 123-42-2, Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8, Carbon Dioxide 124-38-9

New Jersey Right To Know: Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8, Carbon Dioxide 124-38-9, Pine Oil 8002-09-3

Pennsylvania Right To Know: Diacetone Alcohol 123-42-2, Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8, Carbon Dioxide 124-38-9

California Proposition 65:  **WARNING:** This product can expose you to chemicals including beta-myrcene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

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.

Canadian DSL: All of the components of this product are listed on the Canadian Domestic Substances List

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health - 2 Flammability - 4 Physical Hazard - 0

NFPA RATINGS: Health - 1 Flammability - 2 Instability - 0

SDS REVISION HISTORY: Updated formulation - Section 15

DATE OF PREPARATION: November 20, 2020

DATE OF LAST REVISION: July 01, 2020

The information contained herein has been developed based upon current available scientific data. New information may be developed from time to time which may render the conclusions of this report obsolete. Therefore, no warranty is extended as to the applicability of this information to the user's intended purpose or the consequences of its use or misuse.



Safety Data Sheet

This safety data sheet complies with the requirements of: 2012 OSHA Hazard Communication Standard (29CFR 1910.1200)

Product name ANSUL ABC Multipurpose Dry Chemical Agent - Stored Pressure System

1. Identification

1.1. Product Identifier

Product name ANSUL ABC Multipurpose Dry Chemical Agent - Stored Pressure System

1.2. Other means of identification

Product code 435028
UN/ID no UN1044
Synonyms None
Chemical Family No information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use No information available.
Uses advised against Consumer use.

1.4. Details of the Supplier of the Safety Data Sheet

Company Name Tyco Fire Protection Products
One Stanton Street
Marinette, WI 54143-2542
Telephone: 715-735-7411
Contact point Product Stewardship at 1-715-735-7411
E-mail address psra@tycofp.com

1.5. Emergency Telephone Number

Emergency telephone CHEMTREC 001-800-424-9300 or 001-703-527-3887

2. Hazards Identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Simple asphyxiants
Gases Under Pressure - Compressed Gas

2.2. Label Elements

Signal Word

WARNING

Hazard Statements

May displace oxygen and cause rapid suffocation
Contains gas under pressure; may explode if heated





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Precautionary Statements

Storage

Protect from sunlight. Store in a well-ventilated place.

2.3. Hazards Not Otherwise Classified (HNOC)

Not Applicable.

2.4. Other Information

3. Composition/information on Ingredients

3.1. Mixture

The following component(s) in this product are considered hazardous under applicable OSHA(USA)

Chemical name	CAS No.	weight-%
Attapulgate	12174-11-7	1 - 5
Calcium carbonate	471-34-1	1 - 5

4. First aid measures

4.1. Description of first aid measures

General Advice

Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin contact

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: Call a POISON CENTER or doctor/physician if you feel unwell.

Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms

None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians

Keep victim warm and quiet.

5. Fire-fighting measures

5.1. Suitable Extinguishing Media

Use extinguishing agent suitable for type of surrounding fire. Dry chemical or CO2. Water spray, fog or regular foam.



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5.2. Unsuitable Extinguishing Media

None.

5.3. Specific Hazards Arising from the Chemical

Ruptured cylinders may rocket. Some may burn but none ignite readily.

5.4. Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

5.5. Protective Equipment and Precautions for Firefighters

Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists.

6. Accidental release measures

6.1. 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.

For emergency responders Use personal protection recommended in Section 8.

6.2. 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. See Section 12 for additional Ecological Information.

6.3. 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 Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

7. Handling and Storage

7.1. Precautions for Safe Handling

Advice on safe handling Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation. Use personal protective equipment as required. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Store in a well-ventilated place. Keep cool. Keep container tightly closed. Guard against dust accumulation of material. Use care in handling/storage. Pressurized extinguishers



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should be properly stored and secured to prevent falling or being knocked over.

Incompatible Materials Strong acids.

8. Exposure Controls/Personal Protection

8.1. Control Parameters

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL
Attapulgit 12174-11-7	TWA: 1 mg/m ³ respirable particulate matter	-	-	-
Calcium carbonate 471-34-1	-	-	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust	-

ACGIH (American Conference of Governmental Industrial Hygienists) OSHA (Occupational Safety and Health Administration of the US Department of Labor): NIOSH IDLH Immediately Dangerous to Life or Health

8.2. Appropriate Engineering Controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Tight sealing safety goggles.

Skin and Body Protection No special precautions are needed in handling this material.

Respiratory Protection In case of insufficient ventilation, wear suitable respiratory equipment.

Ventilation Use local exhaust or general dilution ventilation to control exposure with applicable limits

8.4. General hygiene considerations

Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State	powder	Color	Yellow
Odor	odorless		
Odor Threshold	No data available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point/freezing point	No data available	
Boiling point / boiling range	No data available	
Flash Point	No data available	
Evaporation Rate	No data available	
Flammability (solid, gas)	No data available	
Flammability limit in air		
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	



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Vapor Pressure	No data available
Vapor Density	No data available
Specific gravity	No data available
Water Solubility	No data available
Solubility in Other Solvents	No data available
Partition coefficient	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Kinematic viscosity	No data available

10. Stability and Reactivity

10.1. Chemical Stability

Stable under recommended storage conditions.

10.2. Reactivity

No data available

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

Hazardous Polymerization	Hazardous polymerization does not occur.
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10.4. Conditions to Avoid

None known based on information supplied.

10.5. Incompatible Materials

Strong acids.

10.6. Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NO_x).

11. Toxicological Information

11.1. Information on Likely Routes of Exposure

Product information

Inhalation	May cause irritation of respiratory tract.
Eye Contact	May cause irritation.
Skin contact	May cause irritation.
Ingestion	Ingestion may cause irritation to mucous membranes.

Component Information

Acute Toxicity



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Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Calcium carbonate 471-34-1	= 6450 mg/kg (Rat)	-	-

11.2. Information on Toxicological Effects

Symptoms No information available.

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

Carcinogenicity Attapulgit (palygorskite fibers) is a hydrated magnesium aluminum silicate. Long palygorskite (attapulgit) fibers (>5 micrometers) are possibly carcinogenic to humans (Group 2B). Short palygorskite (attapulgit) fibers (<5 micrometers) cannot be classified as to their carcinogenicity to humans (Group 3). The attapulgit present in this product contains fibers 0.5-2.5 um range, so would be considered by IARC as Group 3. This product contains crystalline silica (quartz) in a non-respirable form. Inhalation of crystalline silica is unlikely to occur from exposure to this product.

Chemical name	ACGIH	IARC	NTP	OSHA
Attapulgit 12174-11-7	-	Group 3	-	X

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive Toxicity No information available.
STOT - Single Exposure No information available.
STOT - Repeated Exposure No information available.
Target organ effects Eyes, Respiratory System, Skin.
Aspiration Hazard No information available.

11.4. Numerical Measures of Toxicity - Product information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (dermal) 8156 mg/kg

12. Ecological Information

12.1. Ecotoxicity

Not classified.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ammonium sulfate, technical 7783-20-2	-	LC50 96 h 460 - 1000 mg/L Leuciscus idus static; LC50 96 h 123 - 128 mg/L Poecilia reticulata semi-static; LC50 96 h = 126 mg/L Poecilia reticulata; LC50 96 h > 100 mg/L Pimephales promelas; LC50 96 h 32.2 - 41.9 mg/L Oncorhynchus mykiss flow-through; LC50 96 h 5.2 - 8.2 mg/L Oncorhynchus mykiss static; LC50 96 h = 18 mg/L Cyprinus carpio; LC50 96 h = 480 mg/L Brachydanio rerio flow-through; LC50 96 h = 420 mg/L Brachydanio rerio semi-static; LC50 96 h = 250 mg/L Brachydanio rerio	LC50 48 h = 14 mg/L Daphnia magna; EC50 24 h = 423 mg/L Daphnia magna
Silicic Acid/silica gel, Amorphous	EC50 (72h) = 440 mg/L	LC50 (96h) static = 5000 mg/L	EC50 (48h) = 7600 mg/L



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7631-86-9	Pseudokirchneriella subcapitata	Brachydanio rerio	Ceriodaphnia dubia
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12.2. Persistence and Degradability

No information available.

12.3. Bioaccumulation

No information available.

12.4. Other Adverse Effects

No information available

13. Disposal Considerations

13.1. Waste Treatment Methods

Disposal of wastes

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

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

14. Transport Information

DOT

UN/ID no	UN1044
Proper Shipping Name	Fire extinguishers
Description	UN1044, Fire extinguishers, 2.2
Hazard class	2.2
Special Provisions	18, 110
Emergency Response Guide Number	126

TDG

UN/ID no	UN1044
Description	UN1044, Fire extinguishers, 2.2
Proper Shipping Name	Fire extinguishers
Hazard class	2.2

MEX

UN/ID no	UN1044
Description	UN1044, Fire extinguishers, 2.2
Proper Shipping Name	Fire extinguishers
Hazard class	2.2

ICAO (air)

UN/ID no	UN1044
Description	UN1044, Fire extinguishers, 2.2



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Proper Shipping Name Fire extinguishers
Hazard class 2.2
Special Provisions A19

IATA

UN/ID no UN1044
Description UN1044, Fire extinguishers, 2.2
Proper Shipping Name Fire extinguishers
Hazard class 2.2
ERG Code 2L
Special Provisions A19

IMDG

UN/ID no UN1044
Description UN1044, Fire extinguishers, 2.2
Proper Shipping Name Fire extinguishers
Hazard class 2.2
EmS-No F-C, S-V
Special Provisions 225

15. Regulatory Information

15.1. International Inventories

TSCA Complies
DSL/NDL Complies
ENCS Does not comply
IECSC Complies
KECL Does not comply
PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. 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 %
Ammonium dihydrogen phosphate - 7722-76-1	1.0
Ammonium sulfate, technical - 7783-20-2	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard No
Chronic health hazard No
Fire Hazard No
Sudden Release of Pressure Hazard Yes
Reactive Hazard No



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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

15.3. US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Attapulgite - 12174-11-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Silicic Acid/silica gel, Amorphous 7631-86-9	-	X	X
Magnesium carbonate 546-93-0	X	X	-

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

NFPA	Health Hazards 0	Flammability 0	Instability 0	Physical and chemical properties -
HMIS	Health Hazards 0	Flammability 0	Physical Hazards 3	Personal Protection X

Revision date 13-Feb-2019

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

Issue Date: 2-Oct-2014

Revision Date: 2-Oct-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Coil Clean

Other means of identification

SDS # 3226

Recommended use of the chemical and restrictions on use

Recommended Use Cleaning Compound

Details of the supplier of the safety data sheet

Supplier Address

Lundmark Wax Company
350 S La Londe Ave
Addison, IL 60101

Emergency Telephone Number

Company Phone Number (630) 628-1199
Emergency Telephone (24 hr) 800-535-5053 Infotrac

2. HAZARDS IDENTIFICATION

Physical State Liquid

Classification

Skin corrosion/irritation	Category 1C
Serious eye damage/eye irritation	Category 1
Aquatic Toxicity, Acute	Category 3
Aquatic Toxicity, Chronic	Category 3

Hazards Not Otherwise Classified (HNOC)

None

Signal Word

Danger

Hazard Statements

Causes skin irritation
Causes serious eye Damage
Harmful to aquatic life with long lasting effects



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid release to the environment

Precautionary Statements - Response

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 Wash contaminated clothing before reuse.
 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Center or doctor/physician.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Precautionary Statements – Storage:

Store Locked Up

Other Hazards:

None Known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Organic Salt	506-89-8	5-10
2-Butoxyethanol	111-76-2	1-5
Surface Active Agents	Proprietary	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Symptoms	Contact may cause irritation and redness.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Non-flammable solution.

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 Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Use personal protection recommended in Section 8. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing vapors or mists.

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

Exposure Guidelines Exposure limits noted for ingredient(s)

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-Butoxyethanol 111-76-2	TWA: 25 ppm	TWA: 50 ppm	-

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes.

Skin and Body Protection Wear suitable protective clothing.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Not determined
Appearance	Not determined	Odor Threshold	Not determined
Color	Not determined		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children.

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

Eye Contact Avoid contact with eyes.

Skin Contact May cause an allergic skin reaction. Causes skin irritation. May be harmful in contact with

skin.

Inhalation Avoid breathing vapors or mists.**Ingestion** Do not taste or swallow.**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Organic Salt 506-89-8	= 1100 mg/kg (Rat)	-	-
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 2270 mg/kg (Rat) = 220 mg/kg (Rabbit)	= 2.21 mg/L (Rat) 4 h = 450 ppm (Rat) 4 h

Information on physical, chemical and toxicological effects**Symptoms** Please see section 4 of this SDS for symptoms.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity** Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol 111-76-2	A3	Group 3		

Legend*IARC (International Agency for Research on Cancer)**Group 3 IARC components are "not classifiable as human carcinogens"***Numerical measures of toxicity**

Calculated ATC (Oral) for this mixture is >5600 mg/L

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Organic Salt 506-89-8	-	-	-	70-100: 72 h Daphnia magna mg/L EC50
2-Butoxyethanol 111-76-2		1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50		1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
2-Butoxyethanol 111-76-2	0.81

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods**

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

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

SARA 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).

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
2-Butoxyethanol	111-76-2	1-5	1.0

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
2-Butoxyethanol	X	X	X

16. OTHER INFORMATION

Issue Date: 2-Oct-2014
Revision Date: 2-Oct-2014
Revision Note: New format

Disclaimer

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End of Safety Data Sheet

Issue Date: 2-Oct-2014

Revision Date: 26-Oct-2018

Version 2

1. IDENTIFICATION

Product Identifier

Product Name Coil Clean

Other means of identification

SDS # LUN-3226F32-6
LUN-3226G01-2

Recommended use of the chemical and restrictions on use

Recommended Use Cleaning Compound

Details of the supplier of the safety data sheet

Supplier Address

Lundmark Wax Company
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Addison, IL 60101

Emergency Telephone Number

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2. HAZARDS IDENTIFICATION

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Classification

Skin corrosion/irritation	Category 1C
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Aquatic Toxicity, Chronic	Category 3

Hazards Not Otherwise Classified (HNOC)

None

Signal Word

Danger

Hazard Statements

Causes skin irritation
Causes serious eye Damage
Harmful to aquatic life with long lasting effects



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid release to the environment

Precautionary Statements - Response

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 Wash contaminated clothing before reuse.
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 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Precautionary Statements – Storage:

Store Locked Up

Other Hazards:

None Known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
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4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Symptoms	Contact may cause irritation and redness.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Non-flammable solution.

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

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7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Use personal protection recommended in Section 8. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing vapors or mists.

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

Exposure Guidelines Exposure limits noted for ingredient(s)

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-Butoxyethanol 111-76-2	TWA: 25 ppm	TWA: 50 ppm	-

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

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Appearance	Not determined	Odor Threshold	Not determined
Color	Not determined		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children.

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

Eye Contact Avoid contact with eyes.

Skin Contact May cause an allergic skin reaction. Causes skin irritation. May be harmful in contact with

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Information on physical, chemical and toxicological effects**Symptoms** Please see section 4 of this SDS for symptoms.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity** Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol 111-76-2	A3	Group 3		

Legend*IARC (International Agency for Research on Cancer)**Group 3 IARC components are "not classifiable as human carcinogens"***Numerical measures of toxicity**

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2-Butoxyethanol 111-76-2		1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50		1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
2-Butoxyethanol 111-76-2	0.81

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods**

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

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT **Not Regulated**

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

SARA 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).

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
2-Butoxyethanol	111-76-2	1-5	1.0

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
2-Butoxyethanol	X	X	X

16. OTHER INFORMATION

Issue Date: 2-Oct-2014
Revision Date: 26-Oct-2018
Revision Note: Review

Disclaimer

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End of Safety Data Sheet

CORE SPRAY GLUE

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Mixture
CAS No.	Mixture
Trade Name	CORE SPRAY GLUE
Product Code	M-5575

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

Identified Use(s)	Adhesive Product
Uses Advised Against	None
Company Identification	Spray Products Corporation P.O. Box 737 Norristown, PA 19404
Telephone	(610) 277-1010
Fax	(610) 277-4390
E-Mail (competent person)	johnd@sprayproducts.com

Emergency telephone number

Emergency Phone No.	Transportation Emergency: CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)
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SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200)

Flam. Aerosol 1; Liquefied gas; Eye Irrit. 2; Skin Irrit. 2; Repr. 2; STOT SE 3; STOT RE 2; Asp. Tox. 1

Label elements

Hazard Symbol



DANGER

Signal word(s)

Hazard Statement(s)

Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure:
Central Nervous System, Route: Inhalation
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.

CORE SPRAY GLUE

Precautionary Statement(s)

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat/sparks/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 spray.
 Wear protective gloves/eye protection.
 Wash hands and exposed skin after use.
 Use only outdoors or in a well-ventilated area.
 Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.

Other hazards

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt. *	CAS No.	Hazard classification
n-Hexane	25 - 30	110-54-3	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Repr. 2; H361 Skin Irrit. 2; H315 STOT SE 3; H336 STOT RE 2; H373
Acetone	25 - 30	67-64-1	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Propane	20 - 30	74-98-6	Flam. Gas 1; H220 Liquefied gas; H280

Additional Information - None

* The exact percentage withheld as a trade secret in accordance with 29 CFR 1910.1200.

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. If breathing is labored, administer oxygen. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If skin irritation occurs, get medical advice/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. Get medical attention if eye irritation develops or persists.
Ingestion	Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed

Aspiration of droplets may cause pulmonary oedema.

Indication of any immediate medical attention and special treatment needed

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

CORE SPRAY GLUE

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable Extinguishing Media
- Unsuitable Extinguishing Media

Extinguish with carbon dioxide, dry chemical, foam or water spray.
Do not use water jet.

Special hazards arising from the substance or mixture

Highly flammable 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. Avoid contact with skin and eyes. Avoid breathing spray. Wear protective gloves/eye protection.

Environmental precautions

Prevent liquid entering sewers, basements and work pits.

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. Avoid breathing spray.

Conditions for safe storage, including any incompatibilities

-Storage temperature

Keep in a cool, well ventilated place. Protect from sunlight. Store at temperatures not exceeding 50 °C / 122 °F. Keep container tightly closed.

-Incompatible materials

This product should be stored away from sources of strong heat and oxidizing chemicals. Also avoid: acids, bases, reducing agents, peroxides, amines, ammonia, chlorine and halogens.

Specific end use(s)

Adhesive Product

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Hexane	110-54-3	500 ppm	50 ppm*	-----	-----	*Skin
Acetone	67-64-1	1000	500	-----	750	^NIC
Propane	74-98-6	1000 ppm	Aspyx.#	-----	-----	#

^NIC = Notice of Intended Changes (ACGIH®); #Assure minimum oxygen content of work atmosphere.

Recommended monitoring method

NIOSH 1500 (hydrocarbons, B.P. 36 - 126 °C); NIOSH 1300 (Ketones I).

Exposure controls

Appropriate engineering controls

Provide adequate ventilation to ensure that the occupational exposure

CORE SPRAY GLUE

Personal protection equipment

Eye/face protection



limit is not exceeded.

Wear protective eyewear (goggles, face shield, or safety glasses).

Skin protection (Hand protection/ Other)



Wear suitable gloves if prolonged skin contact is likely. Check with protective equipment manufacturer's data.

Respiratory protection



Normally no personal respiratory protection is necessary. In case of insufficient ventilation, wear suitable respiratory equipment. Check with protective equipment manufacturer's data.

Thermal hazards

Not normally required. Use gloves with insulation for thermal protection, when needed.

Environmental Exposure Controls

None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Aerosol spray
Color	Colorless
Odor	Not available
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)	Extremely flammable aerosol.
Explosive Limit Ranges	2.1% - 9.5% v/v (Propane)
Vapor pressure (Pascal)	ca. 95×10^4 (Propane)
Vapor 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	<20.5 @ 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	This product should be stored away from sources of strong heat and oxidizing chemicals. Also avoid: acids, bases, reducing agents, peroxides, amines, ammonia, chlorine and halogens.
Hazardous decomposition product(s)	Forms carbon oxides under fire conditions.

CORE SPRAY GLUE

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

n-Hexane (CAS No. 110-54-3):

Acute toxicity

Oral: LD50 ≈16 g/kg-bw (May be fatal if swallowed and enters airways.)

Dermal: LD50 >2 g/kg-bw. rabbit

Inhalation: LC50 > 17600 mg/m³ (Vapor), 24-hr. rat (May cause drowsiness or dizziness.)

Irritation/Corrosivity

Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Sensitization

It is not a skin sensitizer.

Repeated dose toxicity

LOAEL: 37973 mg/kg (101 days, oral, rat, CNS effects)

NOAEL: 1135 mg/kg (101 days, oral, rat, CNS effects)

NOAEC: 1760 mg/m³ (90 day, inhal., female mice, nasal lesions)

LOAEC: 3000 ppm (12 hr a day for 16 weeks, inhal., rat, CNS effects)

Carcinogenicity (By analogy with similar materials)

NOEL: 31736 mg/m³ (2 years, inhal. Oncogenic effects)

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity

There is no evidence of mutagenic potential.

Reproductive toxicity

Studies in animals have shown that repeated exposures produce adverse reproductive effects.

Acetone (CAS No. 67-64-1):

Acute toxicity

Oral LD50 = 5800 mg/kg (rat)

Dermal LD50 >15800 mg/kg (rabbit)

Inhalation LC50 76 mg/L (4 hour(s)) (rat) - Vapours may cause drowsiness and dizziness.

Irritation / Corrosivity

Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.

Sensitisation

It is not a skin sensitiser.

Repeated dose toxicity

Oral NOAEL = 900 mg/kg/day (rat) (90-days)

Inhalation NOAEL ≥ 19,000 ppm (rat)

Carcinogenicity

It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity

Negative

Toxicity for reproduction

Negative

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

n-Hexane (CAS# 110-54-3):

Short term

LC50 (96 hour): >1000 µg/L (*Oryzias latipes*)

LC50 (48 hour): 45 mmol/m³ (*Daphnia magna*, mortality)

EC50 (96 hour): 2.66% (*C. pyreniodosa*)

Long Term

NOELR (28 days) 2.8 mg/l (*Fish*) QSAR

NOELR (21 days): 4.88 mg/l (*Daphnia magna*) QSAR

NOEL (96 hour) 2.077 mg/l (*Algae*) QSAR

CORE SPRAY GLUE

Acetone (CAS No. 67-64-1):

Short term	LC50 (96 hour): 5,540 mg/l (Rainbow Trout (<i>Oncorhynchus mykiss</i>)) LC50 (96 hour): 8,300 mg/l (Bluegill Sunfish (<i>Lepomis macrochirus</i>)) LC50 (48 hour(s)): 12,600 – 12,700 mg/l (<i>Daphnia magna</i>) EC50 (14 d): 3,020 mg/l (Algae (<i>Chlorella pyrenoidosa</i>)) EC50 (15 min): 14,500 mg/l (Bacteria (<i>Photobacterium phosphoreum</i>))
Long Term	Not available.
Persistence and degradability	Readily biodegradable.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not available.
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.
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SECTION 14: TRANSPORT INFORMATION

	<u>U.S. DOT</u>	<u>Sea transport (IMDG)</u>	<u>Air transport (ICAO/IATA)</u>
UN number	1950	1950	1950
Proper Shipping Name	Aerosols, flammable	Aerosols, flammable	Aerosols, flammable
Transport hazard class(es)	2.1	2.1	2.1
Packing group	Not applicable	Not applicable	Not applicable
Environmental hazards	None assigned	None assigned	None assigned
Special precautions for user	None assigned	None assigned	None assigned

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

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)
n-Hexane	110-54-3	~28	5000
Acetone	67-64-1	~27	5000

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.
n-Hexane	110-54-3	~28

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

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

CORE SPRAY GLUE

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
Benzene*	71-43-2	Cancer; Developmental
Methanol*	67-56-1	Developmental

*Trace to none

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

Date of preparation: March 7, 2015

Hazard Statement(s) and Risk Phrases Listed in: SECTION 2:/ SECTION 3:

Hazard Statement(s)

- H220: Extremely flammable gas.
- H222: Extremely flammable aerosol.
- H225: Highly flammable liquid and vapor.
- H280: Contains gas under pressure; may explode if heated.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H336: May cause drowsiness or dizziness.
- H361: Suspected of damaging fertility or the unborn child.
- H373: May cause damage to organs through prolonged or repeated exposure.

Training advice: None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.



SAFETY DATA SHEET

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards



SDS Revision: 4.0

SDS Revision Date: 1/23/2015

1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	DEOXIT® D-SERIES, 5% SPRAY, (P/N D5S-6), 142 grams, VOC Compliant
1.2	Chemical Name:	NA
1.3	Synonyms:	DeoxIT® D Series, 5% Spray; PN D5S-6
1.4	Trade Names:	DeoxIT® D Series, 5% Spray; PN D5S-6
1.5	Product Uses & Restrictions:	Clean, deoxidize & improve electrical contacts & connectors
1.6	Distributor's Name:	CAIG Laboratories, Inc.
1.7	Distributor's Address:	12200 Thatcher Court, Poway, CA 92064-6876 USA
1.8	Emergency Phone:	CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN XXXXX)
1.9	Business Phone / Fax:	+1 (800) 224-4123

2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	<p>This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). DANGER! PRESSURIZED CONTAINER; MAY BURST IF HEATED. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS. <u>Classification:</u> Aerosols 1 <u>Hazard Statements (H):</u> H229 – Pressurized container; may burst if heated. H304 – May be fatal if swallowed and enters airways. <u>Precautionary Statements (P):</u> P210 – Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. P251 – Do not pierce or burn, even after use P301+P310 – IF SWALLOWED: Immediately call a POISON CENTER/doctor. P332+P313 – If skin irritation occurs: get medical advice/attention. P405 – Store locked up. P410+P412 – Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122 °F. P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDf).</p>	 
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3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)									OTHER
					ACGIH		NOHSC			OSHA				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
PETROLEUM NAPHTHA	64742-88-7	XS5250000	265-191-7	40-70	100	NA	100	NF	NF	NA	NA	NA		
	Asp. Tox. 1; H304													
DIFLUORETHANE (R-152A)	75-37-6	K14100000	200-866-1	10-30	1000	NA	1000	NF	NF	NA	NA	NA	SKIN	
	Flam. Gas 1; Liq. Gas; H220, H280													
DEOXIT® D-SERIES, D100L	PROPRIETARY – TRADE SECRET			3-7	NA	NA	NF	NF	NF	NA	NA	NA		

4. FIRST AID MEASURES

4.1	First Aid:	<p><u>Ingestion:</u> If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p><u>Eyes:</u> Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally. If irritation persists repeat flushing. Get medical attention.</p> <p><u>Skin:</u> Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Treat for frostbite if necessary, be gently warming affected area. If irritation, redness or swelling persists, contact a physician immediately.</p> <p><u>Inhalation:</u> Remove victim to fresh air at once. If breathing difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.</p>
4.2	Effects of Exposure:	<p><u>Ingestion:</u> If product is swallowed, may cause nausea, vomiting and/or diarrhea.</p> <p><u>Eyes:</u> Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.</p> <p><u>Skin:</u> May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.</p> <p><u>Inhalation:</u> None expected.</p>
4.3	Symptoms of Overexposure:	<p><u>Ingestion:</u> Nausea, intestinal discomfort, vomiting and/or diarrhea.</p> <p><u>Eyes:</u> Overexposure in eyes may cause redness, itching and watering.</p> <p><u>Skin:</u> Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.</p>
4.4	Acute Health Effects:	Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. Frostbite like effect to skin.

4. FIRST AID MEASURES – cont'd

4.5	Chronic Health Effects:	Overexposure may trigger asthma-like symptoms in some sensitive individuals. May also induce skin sensitization and respiratory hypersensitivity. Possible allergic dermatitis.		
4.6	Target Organs:	Eyes, Skin, Respiratory System.		
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system).	HEALTH	1
			FLAMMABILITY	2
			PHYSICAL HAZARDS	0
			PROTECTIVE EQUIPMENT	
			EYES	SKIN

5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	Level 3 Aerosol (NFPA 30B). Aerosols may burst at temperatures above 120 °F. Cool uninvolved containers to prevent possible bursting. Aerosols may be projectile hazards when bursting. If aerosols are bursting, stay clear until bursting is complete. This product is not flammable. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, Hydrogen Fluoride).	
5.2	Extinguishing Methods:	Water, Foam, CO ₂ , Dry Chemical. Use water spray to cool unopened containers.	
5.3	Firefighting Procedures:	Fight fires as for surrounding materials. As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Avoid spraying water directly into storage containers because of danger of boil-over. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.	

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills. <u>Small Spills:</u> Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not use water or a material such as "speedy dry" to soak up material. Sweep up material using non-sparking materials (e.g., plastic brooms, shovels, dustpans) and place into a plastic container or plastic liner within another container. <u>Large Spills:</u> Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant.
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Do not eat, drink or smoke when handling this product. Contents under pressure. Handle as to avoid puncturing container(s). When used as intended, no additional protective equipment is necessary. Use chemical goggles if eye contact is possible. Wash unintentional residues with soap and warm water.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage. To avoid unintentional spraying keep cap in place when not in use.
7.3	Special Precautions:	Clean all spills promptly.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m ³)		ACGIH		NOHSC			OSHA			OTHER
		CHEMICAL NAME(S)	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		PETROLEUM NAPHTHA	100	NA	100	NF	NF	NA	NA	NA	
		DIFLUORETHANE (R-152A)	1000	NA	1000	NF	NF	NA	NA	NA	SKIN
		DEOXIT® D-SERIES, D100L	NA	NA	NF	NF	15	NA	NA		
8.2	Ventilation & Engineering Controls:	General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).									
8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. In instances where dusts of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.									
8.4	Eye Protection:	Avoid eye contact. None required under normal conditions of use. Safety glasses could be used when handling or using large quantities of this product.									

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.5	Hand Protection:	None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves.	
8.6	Body Protection:	No apron required when handling small quantities. When handling large quantities (e.g., ≥ 5 lbs), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.	

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Light red aerosol spray/mist
9.2	Odor:	Ethereal hydrocarbon odor
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	171.1-204 °C @ 760 mm Hg
9.7	Flashpoint:	48.8 – 54.4°C (120 - 130 °F)
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	4.9 (air = 1.0)
9.11	Relative Density:	0.75
9.12	Solubility:	Not soluble in water
9.13	Partition Coefficient (log P _{ow}):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	10.0 cPs
9.17	Other Information:	VOC 588 g/L

10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal conditions; unstable with heat or contamination.
10.2	Hazardous Decomposition Products:	Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution.
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Open flames, sparks, high heat, incompatible substances and direct sunlight.
10.5	Incompatible Substances:	Avoid extreme heat and ignition sources. Store away from oxidizers.

11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product.		
11.3	Acute Toxicity:	Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.		
11.4	Chronic Toxicity:	This material may aggravate any pre-existing skin condition (e.g., dermatitis).		
11.5	Suspected Carcinogen:	No.		
11.6	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		
11.7	Irritancy of Product:	The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

12. ECOLOGICAL INFORMATION


12.1	Environmental Stability:	There is no specific data available for this product.
12.2	Effects on Plants & Animals:	There are no specific data available for this product.
12.3	Effects on Aquatic Life:	There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life.

13. DISPOSAL CONSIDERATIONS


13.1	Waste Disposal:	Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Dispose of in accordance with federal, state and local regulations.
13.2	Special Considerations:	California Waste Code: 331

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L); or CONSUMER COMMODITY, ORM-D (IP VOL ≤ 1.0 L) – until 12/31/2020	
14.2	IATA (AIR):	UN1950, AEROSOLS, FLAMMABLE, 2.1 (LTD QTY, IP VOL ≤ 0.5 L); or ID8000, CONSUMER COMMODITY, ORM-D (IP VOL ≤ 0.5 L)	
14.3	IMDG (OCN):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.4	TDGR (Canadian GND):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L); or MARK PACKAGE "LIMITED QUANTITY," "LTD QTY," or "QUANT LTÉE" or "QUANTITÉ LIMITÉE"	
14.5	ADR/RID (EU):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.6	SCT (MEXICO):	UN1950, AEROSOLS, 2.1 (CANTIDAD LIMITADA, IP VOL ≤ 1.0 L)	
14.7	ADGR (AUS):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.	
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.	
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.	
15.4	CERCLA Reportable Quantity (RQ):	NA	
15.5	Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR Subchapter G, (Cosmetics).	
15.6	Other Canadian 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. WHMIS Class B5 (Flammable Aerosol)	
15.7	State Regulatory Information:	<u>Difluoroethane</u> can be found on the following state criteria lists: MA and NJ. No ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).	
15.8	Other Requirements:	The primary components of this product are listed in Annex I of EU Directive 67/548/EEC: <u>Petroleum Naphtha</u> : Flammable, Harmful (F, Xn). <u>Risk Phrases</u> (R): 10-65 – Flammable. Harmful: may cause lung damage if swallowed. <u>Safety Phrases</u> (S): 2-23-24-62 – Keep away from children. Do not breathe gas, fumes, vapor or spray. Avoid contact with skin. If swallowed, do not induce vomiting: seek medical advice immediately and show this MSDS or the container label. WARNING! Flammable aerosol. Colorless, volatile liquid with ethereal and faint sweetish odor. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. MAL-KODE (DK): 1-3	







SAFETY DATA SHEET

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards

SDS Revision: 4.0

SDS Revision Date: 1/23/2015

16. OTHER INFORMATION

16.1	Other Information:	DANGER! PRESSURIZED CONATINER; MAY BURST IF HEATED. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS. Use only as directed. Keep out of reach of children. Do not breathe fumes/spray. May cause lung damage if swallowed. Avoid contact with skin. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible). If skin irritation occurs: get medical advice/attention. KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for:	CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 Tel: +1 (800) CAIG-123 (244-4123) Fax: +1 (858) 486-8398 fax http://www.caig.com/	
16.5	Prepared by:	ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com	

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. 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
C	Ceiling Limit
ES	Exposure Standard (Australia)
IDLH	Immediately Dangerous to Life and Health
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average

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.
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HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Synthetic Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

ML	Maximum Limit
mg/m3	milligrams per cubic meter
NA	Not Available
ND	Not Determined
NE	Not Established
NF	Not Found
NR	No Results
ppm	parts per million
SCBA	Self-Contained Breathing Apparatus

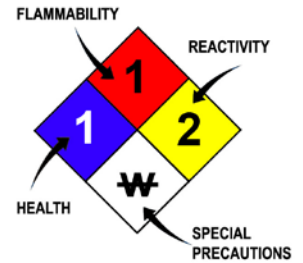
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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
TREFOIL	Radioactive



TOXICOLOGICAL INFORMATION:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₀₁	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₀₁, LD₀₁, & LD₀₁ or TC, TC₀₁, LC₀₁, & LC₀₁	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:

WHMIS	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
NOHSC	National Occupational Health and Safety Commission (Australia)
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)
HMIS-III	National Paint & Coatings Association Hazardous Materials Identification System

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

C	E	F	N	O	T	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment



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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58/EC & 1272/2008/EC Standards

SDS Revision: 5.0

SDS Revision Date: 10/08/2013

1. PRODUCT IDENTIFICATION

1.1	Product Name: DEOXIT® D-SERIES, D5L-A, 5% LIQUID
1.2	Chemical Name: See ingredients listed in section 3
1.3	Synonyms: DeoxIT®, D5L-25C-A, 5% Liquid, 25 ml; DeoxIT®, D5L-4-A, 5% Liquid, 118 ml; DeoxIT®, D5L-12-A, 5% Liquid, 354 ml; DeoxIT®, D5L-32-A, 5% Liquid, 944 ml; DeoxIT®, D5L-5G-A, 5% Liquid, 30 L; DeoxIT®, D5L-55G-A, 5% Liquid, 55 gallon
1.4	Trade Names: DeoxIT® D-Series, D5L-A, 5% Liquid
1.5	Product Use: Clean, deoxidize & improve electrical contacts & connectors
1.6	Manufacturer's Name: CAIG Laboratories, Inc.
1.7	Manufacturer's Address: 12200 Thatcher Court, Poway, CA 92064-6876 USA
1.8	Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-3887
1.9	Business Phone: +1 (800)-224-4123

2. HAZARD IDENTIFICATION

2.1	<p>Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE but not as DANGEROUS GOODS according to the classification criteria of NOHSC: 1008(2004) and ADG Code (Australia). WARNING! COMBUSTIBLE LIQUID. MAY CAUSE AN ALLERGIC SKIN REACTION. Colorless, volatile liquid with ethereal and faint sweetish odor. Overexposure may cause dizziness and loss of concentration. Hazard Statements (H): H227 – Combustible liquid. H317 - May cause an allergic skin reaction. Precautionary Statements (P): P210 – Keep away from flames and hot surfaces – No Smoking. P280 – Wear protective gloves and eye protection. P302 + P352 – IF ON SKIN – Wash with plenty of soap and water. P312 – Call a Poison Control Center or doctor/physician if you feel unwell. P333 + P313 – If skin irritation or rash occurs, get medical advise/attention. P321 – Refer to section 4 of this Safety Data Sheet (First Aid). P305+P351+P338 – IF IN EYES - Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P370 + P378 – In case of fire: Use CO₂, alcohol foam, dry chemical, water fog for extinction. P501 – Dispose of contents/container through licensed treatment, storage or disposal facility.</p>							
2.2	Routes of Entry:	<table border="1"> <tr> <td>Inhalation:</td> <td>YES</td> <td>Absorption:</td> <td>YES</td> <td>Ingestion:</td> <td>YES</td> </tr> </table>		Inhalation:	YES	Absorption:	YES	Ingestion:
Inhalation:	YES	Absorption:	YES	Ingestion:	YES			
2.3	Effects of Exposure:	<p>EYES: Mild to moderate irritation. SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (localized redness or rash). INGESTION: Gastrointestinal irritation and central nervous system depression. INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract.</p>						
2.4	Symptoms of Overexposure:	<p>EYES: Mild irritation, redness, and watering. SKIN: Contact dermatitis, characterized by localized red or puffy dry skin and itching. INGESTION: Nausea, vomiting, and diarrhea. INHALATION: Mouth, nose, and throat irritation, dizziness, nausea, light-headedness, drunkenness, and loss of coordination.</p>						
2.5	Acute Health Effects:	<p>INGESTION: Gastrointestinal irritation and central nervous system depression. EYES: Mild to moderate irritation. SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (e.g., localized redness and/or rash). INGESTION: Gastrointestinal irritation and central nervous system depression. INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract.</p>						
2.6	Chronic Health Effects:	<p>EYES: Mild to moderate irritation. SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (e.g., localized redness and/or rash). INGESTION: Gastrointestinal irritation and central nervous system depression. INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract.</p>						
2.7	Target Organs:	<p>Eyes, skin and respiratory system.</p>						

NA = Not Available; ND = Not Determined; NE = Not Established; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used
 NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2010 format.



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SDS Revision Date: 10/08/2013

3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)								
					ACGIH		NOHSC			OSHA			OTHER
					ppm		ppm			ppm			
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
PETROLEUM NAPHTHA	64742-88-7	XS5250000	265-191-7	60-100	100	NE	100	NE	NE	NA	NE	NE	
METHYL NONAFLUOROBUTYL ETHER	163702-07-6	NA	NA	10-30	750	NA	NF	NA	NA	NE	NA	NA	SKIN
METHYL NONAFLUROISOBTUTYL ETHER	163702-08-7	NA	NA	10-30	750	NA	NF	NA	NA	NE	NA	NA	SKIN
DeoxIT® D100L	TRADE SECRET			1-5	NA	NA	NA	NA	NA	15	NA	NA	

4. FIRST AID MEASURES

4.1	First Aid: EYES: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention. SKIN: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Drink plenty of water. If irritation persists, contact a physician. INHALATION: Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.
4.2	Medical Conditions Aggravated by Exposure: None reported by the manufacturer.

HEALTH	1
FLAMMABILITY	2
PHYSICAL HAZARDS	0
PROTECTIVE EQUIPMENT	B
EYES	SKIN

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: 48.8-54.4 °C (120-130 °F)
5.2	Autoignition Temperature: NA
5.3	Flammability Limits: Lower Explosive Limit (LEL): NA Upper Explosive Limit (UEL): NA
5.4	Fire & Explosion Hazards: Carbon dioxide, carbon monoxide, hydrocarbons.
5.5	Extinguishing Methods: CO₂, Alcohol foam, Dry Chemical, Water Fog
5.6	Firefighting Procedures: Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills: Secure spill area and deny entry to all unprotected individuals. Individuals involved in the cleanup should wear appropriate personal protective equipment. Area may become slippery. Absorb product onto porous material, such as sand, clay, diatomaceous earth or commercial absorbent material. Place into leak-proof, U.S. DOT-approved containers. If necessary, cover all drains and dike well ahead of the spill to prevent runoff into sewers, drains, and all waterways. Contact appropriate local or provincial authorities for assistance and/or reporting requirements.
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact.
7.2	Storage & Handling: Store at temperatures between 59-95 °F (15-35 °C) in a dry, well-ventilated location. Keep away from heat, sparks, open flame, and other sources of ignition. Normal shelf-life: 2-3 years.
7.3	Special Precautions: Empty containers can contain flammable vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls: Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).
8.2	Respiratory Protection: None required, when used with adequate ventilation.
8.3	Eye Protection: Wear safety glasses with side shields (ANSI Z87) under normal use conditions.
8.4	Hand Protection: None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves.
8.5	Body Protection: Use as necessary to prevent skin contact.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	0.75
9.2	Boiling Point:	171.1– 204 °C @ 760 mm Hg
9.3	Melting Point:	NA
9.4	Evaporation Rate:	0.11 (n-Butyl Acetate = 1.0)
9.5	Vapor Pressure:	35 psig @ 20 °C, 50 psig @ 50 °C
9.6	Molecular Weight:	NA
9.7	Appearance & Color:	Light red liquid
9.8	Odor Threshold:	Ethereal/hydrocarbon odor
9.9	Solubility:	Not soluble in water
9.10	pH	ND
9.11	Viscosity:	10.0 cPs
9.12	VOC (grams/liters)	588 g/L
9.13	Other Information:	NA

10. STABILITY & REACTIVITY

10.1	Stability: Stable under normal conditions of use (see section 7).
10.2	Hazardous Decomposition Products: Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution.
10.3	Hazardous Polymerization: Will not occur.
10.4	Conditions to Avoid: Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and heavily trafficked areas.
10.5	Incompatible Substances: Strong oxidizers.



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11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data: This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature. These data have not been presented in this document.
11.2	Acute Toxicity: See section 3.5
11.3	Chronic Toxicity: See section 3.6
11.4	Suspected Carcinogen: NE
11.5	This product is not reported to produce reproductive toxicity in humans.
	Mutagenicity: This product is not reported to produce mutagenic effects in humans.
	Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.
	Teratogenicity: This product is not reported to produce teratogenic effects in humans.
	Reproductive Toxicity: This product is not reported to produce reproductive effects in humans.
11.6	Irritancy of Product: See Section 2.3
11.7	Biological Exposure Indices: NE
11.8	Physician Recommendations: Treat symptomatically.

12. ECOLOGICAL INFORMATION


12.1	Environmental Stability: This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds.
12.2	Effects on Plants & Animals: There is no specific data available for this product.
12.3	Effects on Aquatic Life: Releases of large volumes of this product are expected to be harmful or fatal to overexposed aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal: Dispose of in accordance with federal, state or local regulations.
13.2	Special Considerations: EPA Waste Code: D001 (characteristic – ignitability)

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND): NOT REGULATED PER 49 CFR 173.150(f)	
14.2	IATA (AIR): ID8000 CONSUMER COMMODITY, 9 (≤ 500 ml) UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III (IP VOL > 500 ml)	
14.3	IMDG (OCN): UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III, LTD QTY (IP VOL ≤ 5.0 L) UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III (IP VOL > 5.0 L)	
14.4	TDGR (Canadian GND): MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" (IP VOL ≤ 5.0 L) UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III (IP VOL > 5.0 L)	
14.5	ADR/RID (EU): UN1268 PETROLEUM DISTILLATES, N.O.S., 3, III, LTD QTY (IP VOL ≤ 5.0 L) UN1268 PETROLEUM DISTILLATES, N.O.S., 3, III (IP VOL > 5.0 L)	
14.6	SCT (MEX): UN1268, DESTILADO DEL PETROLEO, N.E.P., 3, III, CANTIDAD LIMITADA (IP VOL ≤ 5.0 L) UN1268, DESTILADO DEL PETROLEO, N.E.P., 3, III (IP VOL > 5.0 L)	
14.7	ADG5R (EU): UN1268 PETROLEUM DISTILLATES, N.O.S., 3, III, LTD QTY (IP VOL ≤ 5.0 L) UN1268 PETROLEUM DISTILLATES, N.O.S., 3, III (IP VOL > 5.0 L)	



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15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: NA	
15.2	SARA Threshold Planning Quantity: NA	
15.3	TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status.	
15.4	CERCLA Reportable Quantity (RQ): NA	
15.5	Other Federal Requirements: NA	
15.6	Other Canadian Regulations This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDL. None of the components of this product are listed on the Priorities Substances List.	
15.7	State Regulatory Information: The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List.	
15.8	67/548/EEC (European Union) Requirements: The primary component of this product is listed in Annex I of EU Directive 67/548/EEC: Petroleum Naphtha: Flammable, Harmful (F, Xn). Risk Phrases (R): 10-65 – Flammable. Harmful: may cause lung damage if swallowed. Safety Phrases (S): 2-23-24-62 – Keep away from children. Do not breathe gas, fumes, vapor or spray. Avoid contact with skin. If swallowed, do not induce vomiting: seek medical advice immediately and show this MSDS or the container label. WARNING! Flammable aerosol. Colorless, volatile liquid with ethereal and faint sweetish odor. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces.	

16. OTHER INFORMATION

16.1	Other Information: NA	
16.2	Terms & Definitions: See last page of this MSDS.	
16.3	Disclaimer: This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & CAIG Laboratories, Inc.'s 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(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for: CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 Tel: +1 (800) CAIG-123 (244-4123) Fax: +1 (858) 486-8398 fax http://www.caig.com/	
16.5	Prepared by: ShipMate, Inc. P.O. Box 787 780 Buckaroo Trail Suite D Sisters, OR 97759 Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com	

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

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Eye Protection	Gloves
Boots	Synthetic Apron	Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

Note: the dotted circle indicates that this respiratory protective equipment is required for high concentrations or for large volume spills or releases of product.

OTHER STANDARD ABBREVIATIONS:

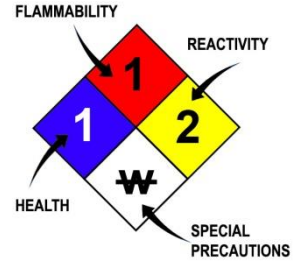
NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

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
TREFOIL	Radioactive



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD ₀₁	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD ₀₁ , LD ₀₁ , & LD ₀₁ or TC, TC ₀₁ , LC ₀₁ , & LC ₀₁	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
TLm	Median threshold limit
log K _{ow} or log K _{oc}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	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
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

A	B	C	D1	D2	D3	E	F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful/Irritating	Health Hazard	Environment

SAFETY DATA SHEET

Section 1. IDENTIFICATION

Product Identifier

Product Name General Purpose Thred Gard.

Other means of Identification

Product Code TG04, TG08, TG16.

Recommended Use Anti Seize Compound.

Recommended Restrictions None Known.

Manufacturer

Company Name Federal Process Corporation
Address 4520 Richmond Road
 Cleveland OH 44128
Telephone 1-800-846-7325

Emergency Telephone Number: Call Chemtrec at 1-800-424-9300

Section 2. HAZARDS IDENTIFICATION

PHYSICAL STATE: Grease Like

Classification:

Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

Signal Word: Warning



Hazard Statements: H319 – Causes serious eye irritation.

H317 – May cause an allergic skin reaction

Precautionary Statements:

Prevention: Not expected to be present a hazard during normal use.

Response: P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313–If eye irritation persists: Get medical advice/attention.
 P332 + P313 – If skin irritation or rash occurs: Get medical advice/attention.

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

Other Hazards: Toxic to aquatic life with long lasting effects.

Unknown Acute Toxicity: 2% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Petroleum oil	64741-96-4	60-80
Red iron oxide	1309-37-1	5-10

Section 4. FIRST AID MEASURES

First Aid Measures:

Eye Contact Rinse thoroughly with plenty of water, for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Skin Contact If skin irritation occurs, rinse affected area with water. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation Remove to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Ingestion Do NOT induce vomiting Get medical attention immediately. Rinse mouth with water. Never give anything by mouth to an unconscious individual.

Most Important Symptoms and effects:

Symptoms Direct contact with eyes may cause temporary irritation.
Do NOT ingest.

Section 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use foam, dry chemical, carbon dioxide or water fog.

Unsuitable Extinguishing Media: Avoid solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical:

Carbon oxides expected to be the primary hazardous combustion product.

Protective Equipment and Precautions for Firefighters:

As in any fire, wear self-contained breathing apparatus and other protective clothing (approved or equivalent) and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Personal Precautions: Use personal protective equipment as required. Keep unnecessary personnel away.

Methods and Material for Containment and Cleaning Up:

Methods for Containment: Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up: Keep in suitable, closed containers for disposal.

Section 7. HANDLING AND STORAGE

Precautions for Safe Handling:

Advice on Safe Handling: Avoid breathing vapors or mists. Contaminated work-clothing should not be allowed out of the workplace.

Conditions for Safe Storage, including

Any Incompatibilities:

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place.
Do not store near heat, sparks, or open flames.
KEEP OUT OF REACH OF CHILDREN.

Incompatible Materials: None known based on information supplied.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA
Petroleum oil (CAS 64741-96-4)	5 mg/m ³	N/A	5 mg/m ³
Red iron oxide (CAS 1309-37-1)	NO DATA	NO DATA	NO DATA

Appropriate Engineering Controls:

Engineering Controls: Apply technical measures to comply with the occupational exposure limits.

Individual Protection Measures, such as
Personal Protective Equipment:

Eye/Face Protection: Avoid contact with eyes.

Skin and Body Protection: No protective equipment is needed under normal use conditions.

Respiratory Protection: Ensure adequate ventilation, especially in confined areas. If confined in poorly ventilated areas use NIOSH/MSHA

General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice. Wash exposed areas thoroughly before eating, drinking, smoking or leaving work area. Launder contaminated clothing before reusing.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State: Grease like. Odor: Mild.
Appearance: Viscous. Odor Threshold: Not available.
Color: Red

Property Values
pH N/A

Melting Point/Freezing Point	Not determined.
Boiling Point/Boiling Range	Not determined.
Flash Point	>430F (>221C) Closed Cup.
Evaporation Rate	Not determined.
Flammability (Solid, Gas)	n/a-liquid
Upper Flammability Limit	Not determined.
Lower Flammability Limit	Not determined.
Vapor Pressure	Not determined.
Vapor Density	Not determined.
Specific Gravity	Not determined.
Water Solubility	None.
Solubility in other Solvents	Not determined.
Partition Coefficient (n-octanol/water)	Not determined.
Auto-ignition Temperature	Not determined.
Decomposition Temperature	Not determined.
Kinematic Viscosity	Not determined.
Explosive Properties	Not determined.
Oxidizing Properties	Not determined.

Section 10. STABILITY AND REACTIVITY

<u>Reactivity:</u>	Not reactive under normal conditions.
<u>Chemical Stability:</u>	Stable under recommended storage conditions.
<u>Possibility of Hazardous Reactions:</u>	None under normal processing.
<u>Conditions to Avoid:</u>	Keep out of reach of children.
<u>Incompatible Materials:</u>	None known.
<u>Hazardous Decomposition Products:</u>	Oxides of carbon.

Section 11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Eye Contact: Causes serious eye irritation.

Skin Contact: May cause an allergic skin reaction.

Inhalation: Avoid breathing vapors or mists.

Ingestion: Do not taste or swallow.

Component Information:

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum oil (CAS 64741-96-4)	N/A	N/A	N/A
Red iron oxide (CAS 1309-37-1)	>10 g/kg (Rat)	N/A	N/A

Information on physical, chemical and toxicological effects:

Symptoms: Please section 4 of this SDS for symptoms.

Delayed and Immediate Effects as Well as Chronic Effects From Short and Long Term Exposure:

Sensitization: May cause an allergic skin reaction.

Carcinogenicity: Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Petroleum oil (CAS 64741-96-4)	NO DATA	NO DATA	NO DATA	NO DATA
Red iron oxide (CAS1309-37-1)	NO DATA	NO DATA	NO DATA	NO DATA

Legend

IARC (International Agency for Research on Cancer).

Group3 IARC components are “not classifiable as human carcinogens”.

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Numerical Measures of Toxicity:

Not Determined.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Toxic to aquatic life with lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Petroleum oil (64741-96-4)	N/D	N/D	N/D	N/A
Red iron oxide (1309-37-1)	N/D	>10,000 mg/kg	N/D	N/D

Persistence/Degradability: Not determined.

Bioaccumulation: Not determined.

Mobility: Not determined.

Other Adverse Effects: Not determined.

Section 13. DISPOSAL CONSIDERATIONS

Waste Treatment Method:

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

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

Section 14. TRANSPORT INFORMATION

DOT: Not Regulated

PROPER SHIPPING NAME: N/A.

IDENTIFICATION NUMBER: N/A

IATA: Not regulated

IMDG: Not regulated..

Section 15. REGULATORY INFORMATION

<u>International Inventories:</u>	Not determined.
<u>U.S. Federal Regulations:</u>	Not determined.
Petroleum oil <u>SARA 313:</u>	No.
Copper flakes SARA 313	Yes
TSCA Inventory:	Yes.
<u>U.S Right-to-Know Regulations:</u>	Not determined.

Section 16. OTHER INFORMATION

NFPA:	Health Hazards 1	Flammability 1	Instability 0	Special Hazards Not determined
HMIS	Health Hazards 1	Flammability 1	Instability 0	Special Hazards Not determined

Issue Date: 1st March 2014

Revision Date: 1^{23rd} March 2018

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End of Safety Data Sheet

SAFETY DATA SHEET

Section 1. IDENTIFICATION

Product Identifier

Product Name General Purpose Thred Gard.

Other means of Identification

Product Code TG04, TG08, TG16.

Recommended Use Anti Seize Compound.

Recommended Restrictions None Known.

Manufacturer

Company Name Federal Process Corporation
Address 4520 Richmond Road
 Cleveland OH 44128
Telephone 1-800-846-7325

Emergency Telephone Number: Call Chemtrec at 1-800-424-9300

Section 2. HAZARDS IDENTIFICATION

PHYSICAL STATE: Grease Like

Classification:

Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

Signal Word: Warning



Hazard Statements: H319 – Causes serious eye irritation.

H317 – May cause an allergic skin reaction

Precautionary Statements:

Prevention: Not expected to be present a hazard during normal use.

Response: P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313–If eye irritation persists: Get medical advice/attention.

P332 + P313 – If skin irritation or rash occurs: Get medical advice/attention.

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

Other Hazards: Toxic to aquatic life with long lasting effects.

Unknown Acute Toxicity: 2% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Petroleum oil	64741-96-4	60-80
Red iron oxide	1309-37-1	5-10

Section 4. FIRST AID MEASURES

First Aid Measures:

Eye Contact Rinse thoroughly with plenty of water, for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Skin Contact If skin irritation occurs, rinse affected area with water. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation Remove to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Ingestion Do NOT induce vomiting Get medical attention immediately. Rinse mouth with water. Never give anything by mouth to an unconscious individual.

Most Important Symptoms and effects:

Symptoms Direct contact with eyes may cause temporary irritation.
Do NOT ingest.

Section 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use foam, dry chemical, carbon dioxide or water fog.

Unsuitable Extinguishing Media: Avoid solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical:

Carbon oxides expected to be the primary hazardous combustion product.

Protective Equipment and Precautions for Firefighters:

As in any fire, wear self-contained breathing apparatus and other protective clothing (approved or equivalent) and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Personal Precautions: Use personal protective equipment as required. Keep unnecessary personnel away.

Methods and Material for Containment and Cleaning Up:

Methods for Containment: Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up: Keep in suitable, closed containers for disposal.

Section 7. HANDLING AND STORAGE

Precautions for Safe Handling:

Advice on Safe Handling: Avoid breathing vapors or mists. Contaminated work-clothing should not be allowed out of the workplace.

Conditions for Safe Storage, including

Any Incompatibilities:

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place.
Do not store near heat, sparks, or open flames.
KEEP OUT OF REACH OF CHILDREN.

Incompatible Materials: None known based on information supplied.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA
Petroleum oil (CAS 64741-96-4)	5 mg/m ³	N/A	5 mg/m ³
Red iron oxide (CAS 1309-37-1)	NO DATA	NO DATA	NO DATA

Appropriate Engineering Controls:

Engineering Controls: Apply technical measures to comply with the occupational exposure limits.

Individual Protection Measures, such as
Personal Protective Equipment:

Eye/Face Protection: Avoid contact with eyes.

Skin and Body Protection: No protective equipment is needed under normal use conditions.

Respiratory Protection: Ensure adequate ventilation, especially in confined areas. If confined in poorly ventilated areas use NIOSH/MSHA

General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice. Wash exposed areas thoroughly before eating, drinking, smoking or leaving work area. Launder contaminated clothing before reusing.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State: Grease like. Odor: Mild.
Appearance: Viscous. Odor Threshold: Not available.
Color: Red

Property Values
pH N/A

Melting Point/Freezing Point	Not determined.
Boiling Point/Boiling Range	Not determined.
Flash Point	>430F (>221C) Closed Cup.
Evaporation Rate	Not determined.
Flammability (Solid, Gas)	n/a-liquid
Upper Flammability Limit	Not determined.
Lower Flammability Limit	Not determined.
Vapor Pressure	Not determined.
Vapor Density	Not determined.
Specific Gravity	Not determined.
Water Solubility	None.
Solubility in other Solvents	Not determined.
Partition Coefficient (n-octanol/water)	Not determined.
Auto-ignition Temperature	Not determined.
Decomposition Temperature	Not determined.
Kinematic Viscosity	Not determined.
Explosive Properties	Not determined.
Oxidizing Properties	Not determined.

Section 10. STABILITY AND REACTIVITY

<u>Reactivity:</u>	Not reactive under normal conditions.
<u>Chemical Stability:</u>	Stable under recommended storage conditions.
<u>Possibility of Hazardous Reactions:</u>	None under normal processing.
<u>Conditions to Avoid:</u>	Keep out of reach of children.
<u>Incompatible Materials:</u>	None known.
<u>Hazardous Decomposition Products:</u>	Oxides of carbon.

Section 11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Eye Contact: Causes serious eye irritation.

Skin Contact: May cause an allergic skin reaction.

Inhalation: Avoid breathing vapors or mists.

Ingestion: Do not taste or swallow.

Component Information:

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum oil (CAS 64741-96-4)	N/A	N/A	N/A
Red iron oxide (CAS 1309-37-1)	>10 g/kg (Rat)	N/A	N/A

Information on physical, chemical and toxicological effects:

Symptoms: Please section 4 of this SDS for symptoms.

Delayed and Immediate Effects as Well as Chronic Effects From Short and Long Term Exposure:

Sensitization: May cause an allergic skin reaction.

Carcinogenicity: Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Petroleum oil (CAS 64741-96-4)	NO DATA	NO DATA	NO DATA	NO DATA
Red iron oxide (CAS1309-37-1)	NO DATA	NO DATA	NO DATA	NO DATA

Legend

IARC (International Agency for Research on Cancer).

Group3 IARC components are “not classifiable as human carcinogens”.

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Numerical Measures of Toxicity:

Not Determined.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Toxic to aquatic life with lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Petroleum oil (64741-96-4)	N/D	N/D	N/D	N/A
Red iron oxide (1309-37-1)	N/D	>10,000 mg/kg	N/D	N/D

Persistence/Degradability: Not determined.

Bioaccumulation: Not determined.

Mobility: Not determined.

Other Adverse Effects: Not determined.

Section 13. DISPOSAL CONSIDERATIONS

Waste Treatment Method:

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

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

Section 14. TRANSPORT INFORMATION

DOT: Not Regulated

PROPER SHIPPING NAME: N/A.

IDENTIFICATION NUMBER: N/A

IATA: Not regulated

IMDG: Not regulated..

Section 15. REGULATORY INFORMATION

International Inventories: Not determined.

U.S. Federal Regulations: Not determined.

Petroleum oil
SARA 313: No.

Copper flakes
SARA 313 Yes

TSCA Inventory: Yes.
U.S Right-to-Know Regulations: Not determined.

Section 16. OTHER INFORMATION

NFPA:	Health Hazards 1	Flammability 1	Instability 0	Special Hazards Not determined
HMIS	Health Hazards 1	Flammability 1	Instability 0	Special Hazards Not determined

Issue Date: 1st March 2014

Revision Date: 1^{23rd} March 2018

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End of Safety Data Sheet



1 Identification

GHS Product Identifier

Product Form: Aerosol
Trade Name: Glass Shine Alcohol-Free Premium Foaming Glass Cleaner
Product Number: GG-003-012

Recommended use of the chemical and restriction on use

Glass Cleaner & Surface Cleaner

Supplier's details

Max Pro
P.O. Box 9962
Ft. Lauderdale, FL 33310 USA

Tel.: 954-972-3338

Emergency phone number

CHEMTREC 24 Hour Emergency Response
USA & Canada 800-424-9300

2 Hazard(s) identification

Classification of the substance or mixture

Gases under pressure; Compressed gas

GHS label elements

Warning



Contains gas under pressure; may explode if heated

Obtain special instructions before use.

Do not pierce or burn, even after use.

Protect from sunlight. Store in a well-ventilated place.

Other hazards which do not result in classification

Causes mild skin irritation. May cause slight eye irritation. Prolonged or repeated contact may dry skin and cause irritation. Harmful to aquatic life with long lasting effects. Use of alcoholic beverages may enhance toxic 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 above. The labeling above applies to industrial/professional products.

3 Composition/information on ingredients

Description	CAS Number	EINECS Number	%	Note
sodium xylenesulfonate	1300-72-7		1 - 5	
Alkyl Polyglucoside	68515-73-1		1 - 5	
Sodium Lauryl Sulfate	151-21-3		1 - 5	
Water	7732-18-5		81.66	
	74-98-6		2	Petroleum Hydrocarbon
	75-28-5		0.54	Petroleum Hydrocarbon
	106-97-8		0.8	Petroleum Hydrocarbon

4 First-aid measures

Description of necessary first-aid measures

Eye Contact:	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin Contact:	In case of contact with liquefied gas, thaw frosted parts with lukewarm water. Wash with soap and water.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen.
Ingestion:	Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.
Self-protection of the first aider:	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms/effects, acute and delayed

No information available.

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. Carbon dioxide (CO₂).

Specific hazards arising from the chemical

Ruptured cylinders may rocket. Some may burn but none ignite readily.

Uniform Fire Code Aerosols: Level I

Hazardous Combustion Products: Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact: No

Sensitivity to Static Discharge: No

Special protective actions for fire-fighters

Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Stop leak if you can do it without risk.

Other Information: Ventilate the area.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

Methods and materials 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.

7 Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Do not puncture or incinerate cans. Contents under pressure. Avoid breathing vapors or mists. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight.

Incompatible Products: None known based on information supplied.

8 Exposure controls/personal protection

Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Monoethanolamine 141-43-5	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m ³ (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m ³ (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m ³	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m ³ STEL: 6 ppm STEL: 15 mg/m ³
Butane 106-97-8	STEL: 1000ppm	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m ³	TWA: 800 ppm TWA: 1900 mg/m ³
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m ³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering Measures: Showers; Eyewash stations; Ventilation systems

Individual protection measures

Eye/Face Protection: No special protective equipment required.

Skin and Body Protection: No special protective equipment required.

Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

9 Physical and chemical properties

Physical and chemical properties

Physical State:	Liquid Spray Alcohol
Appearance:	Clear
Color:	No information available.
Odor:	Fresh
Odor Threshold:	No information available.
pH:	7
Melting/Freezing Point:	No data available.
Boiling Point/Boiling Range:	No data available.
Flash Point:	No data available.
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit in Air:	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Vapor Pressure:	No data available.
Vapor Density:	No data available.
Specific Gravity:	No data available.
Water Solubility:	Soluble (>1%)
Solubility in other solvents:	No data available.
Partition coefficient n-octanol/water:	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Kinematic Viscosity:	No data available.
Dynamic Viscosity:	No data available.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Softening Point:	No data available.
VOC Content (%):	4
Particle Size:	No data available.
Particle Size Distribution:	No data 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

None known based on information supplied.

Hazardous decomposition products

Carbon oxides.

11 Toxicological information

Toxicological (health) effects

Symptoms: No information available.

Information on the likely routes of exposure

Product Information: Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation: Specific test data for the substance or mixture is not available.

Eye contact: Specific test data for the substance or mixture is not available.

Skin contact: Specific test data for the substance or mixture is not available.

Ingestion: Specific test data for the substance or mixture is not available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Xylene Sulfonate (1300-72-7)	= 1000 mg/kg (Rat)	-	-
Alkyl Polyglucoside (68515-73-1)	> 5000 mg/kg (Rat)	-	-
Sodium Lauryl Sulfate (151-21-3)	= 1288 mg/kg (Rat) > 2000 mg/kg (Rat) = 1783 mg/kg (Rat)	= 2000 mg/kg (Rabbit)	> 3900 mg/kg ³ (Rat) 1 h
Butane (106-97-8)			= 658 g/m ³ (Rat) 4 h
Propane (74-96-8)			= 658 mg/L (Rat) 4 h

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization: No information available.

12 Ecological information**Toxicity****Ectotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Alkyl Polyglucoside (68515-73-1)	-	170: 96 h Danio rerio mg/L LC50 semi-static	-
Sodium Lauryl Sulfate (151-21-3)	3.59 - 15.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 30 - 100: 96 h Desmodesmus subspicatus mg/L EC50 117: 96 h Pseudokirchneriella subcapitata mg/L EC50 38: 96 h Desmodesmus subspicatus mg/L EC50 42: 96 h Desmodesmus subspicatus mg/L EC50 53: 72 h Desmodesmus subspicatus mg/L EC50	10.2 - 22.5: 96 h Pimephales promelas mg/L LC50 semi- static 10.8 - 16.6: 96 h Poecilia reticulata mg/L LC50 static 13.5 - 18.3: 96 h Poecilia reticulata mg/L LC50 semi-static 15 - 18.9: 96 h Pimephales promelas mg/L LC50 static 22.1 - 22.8: 96 h Pimephales promelas mg/L LC50 static 4.06 - 5.75: 96 h Lepomis macrochirus mg/L LC50 static 4.2 - 4.8: 96 h Lepomis macrochirus mg/L LC50 flow-through 4.3 - 8.5: 96 h Oncorhynchus mykiss mg/L LC50 static 5.8 - 7.5: 96 h Pimephales promelas mg/L LC50 static 6.2 - 9.6: 96 h Pimephales promelas mg/L LC50 8 - 12.5: 96 h Pimephales promelas mg/L LC50 static 9.9 - 20.1: 96 h Brachydanio rerio mg/L LC50 semi-static 1.31: 96 h Cyprinus carpio mg/L LC50 semi-static 4.2: 96 h Oncorhynchus mykiss mg/L LC50	1.8: 48 h Daphnia magna mg/L EC50

		<p>4.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50</p> <p>4.62: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through</p> <p>7.97: 96 h <i>Brachydanio rerio</i> mg/L LC50 flow-through</p>	
Monoethanolamine (141-43-5)	15: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	<p>114 - 196: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static</p> <p>300 - 1000: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static</p> <p>227: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through</p> <p>3684: 96 h <i>Brachydanio rerio</i> mg/L LC50 static</p> <p>200: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through</p>	65: 48 h <i>Daphnia magna</i> mg/L EC50
Sodium Sulfate 7757-82-6	-	<p>13500 - 14500: 96 h <i>Pimephales promelas</i> mg/L LC50</p> <p>3040 - 4380: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static</p> <p>13500: 96 h <i>Lepomis macrochirus</i> mg/L LC50</p> <p>6800: 96 h <i>Pimephales promelas</i> mg/L LC50 static</p>	2564: 48 h <i>Daphnia magna</i> mg/L EC50

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Sodium Lauryl Sulfate (151-21-3) Partition coefficient: 1.6

Mobility in soil

No data available

Other adverse effects

No information available.

13 Disposal considerations

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether¹¹³

the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging: Dispose of contents/containers in accordance with local regulations.

14 Transport information

UN Number

UN1950

UN Proper Shipping Name

Aerosols, non-flammable

Transport hazard class(es)

2

15 Regulatory information

Safety, health and environmental regulations specific for the product in question

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.
IECSC	-

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	Yes
Reactive hazard	No

16 Other information

Other information

HMIS Ratings

Health	1
Flammability	1
Physical Hazard	0
Personal Protection	B

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.



1 Identification

GHS Product Identifier

Trade Name: Glass Shine Premium Foaming Glass Cleaner

Item No.: 3012

Recommended use of the chemical and restriction on use

Glass Cleaner & Surface Cleaner

Supplier's details

Max Pro
P.O. Box 9962
Ft. Lauderdale, FL 33310 USA

Tel: 954-972-3338

Emergency phone number

CHEMTREC 24 Hour Emergency Response
USA & Canada 800-424-9300

2 Hazard(s) identification

Classification of the substance or mixture

GHS Categories

Criteria	Category	Signal Word	Pictograms
Gas under pressure; compressed gas	3	Warning	Gas Cylinder

Note: This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS label elements

Warning



- Contains gas under pressure; may explode if heated
- Pressurized container: Do not pierce or burn, even after use.
- Protect from sunlight. Store in a well-ventilated place.
- Obtain special instructions before use.

Other hazards which do not result in classification

Causes mild skin irritation. May cause slight eye irritation. Prolonged or repeated contact may dry skin and cause irritation. Harmful to aquatic life with long lasting effects. Use of alcoholic beverages may enhance toxic effects.

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission 115

regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements above. The labeling above applies to industrial/professional products.

3 Composition/information on ingredients

Description	CAS Number	%	Note
Butane	106-97-8	0	
Propane	74-98-6	0	
2-Butoxyethanol	111-76-2	0	

4 First-aid measures

Description of necessary first-aid measures

First-aid measures general:	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
First-aid measures after 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.
First-aid measures after skin contact:	In case of contact with liquified gas, thaw frosted parts with lukewarm water. Wash with soap and water.
First-aid measures after 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.
First-aid measures after ingestion:	DO NOT induce vomiting. Rinse Mouth. Drink plenty of water. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

No information available.

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

Treat symptomatically.

5 Fire-fighting measures

Suitable extinguishing media

Dry chemical. Carbon Dioxide (CO₂).

Specific hazards arising from the chemical

Ruptured cylinders may rocket. Some may burn but none ignite readily. DO NOT extinguish a leaking gas fire unless the leak can be stopped.

Special protective actions for fire-fighters

Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists. Wear self-contained breathing apparatus for fire fighting. Produces Carbon Oxides upon combustion.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Stop leak if you can do it without risk. Ventilate the area.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

Methods and materials for containment and cleaning up

If possible, turn leaking containers so that gas escapes rather than liquid. Allow substance to evaporate. Do not direct water at spill or source of leak.

7 Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practices. Do not puncture or incinerate cans. Contents under pressure. Avoid breathing vapors or mists. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. No known incompatibilities based on information supplied.

8 Exposure controls/personal protection

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Butane 106-97-8	STEL: 1000 ppm	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m ³	TWA: 800 ppm TWA: 1900 mg/m ³
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m ³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m ³
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value **OSHA PEL:** Occupational Safety and Health Administration - Permissible Exposure Limits **NIOSH IDLH:** Immediately Dangerous to Life Health

Other Exposure Guidelines: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters.

Appropriate engineering controls

Showers, Eyewash stations, Ventilation systems.

Individual protection measures

Eye/Face Protection	No special protective equipment required.
Skin/Body Protection	No special protective equipment required.
Respiratory Protection	No special protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practices.

9 Physical and chemical properties

Physical and chemical properties

Physical State:	Liquid Spray Alcohol
Appearance:	Clear
Color:	No information available.
Odor:	Fresh
Odor Threshold:	No information available.
pH:	7
Melting/Freezing Point:	No data available.
Boiling Point/Boiling Range:	No data available.
Flash Point:	No data available.
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit in Air:	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Vapor Pressure:	No data available.
Vapor Density:	No data available.
Specific Gravity:	No data available.
Water Solubility:	Soluble (>1%)
Solubility in other solvents:	No data available.
Partition coefficient n-octanol/water:	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Kinematic Viscosity:	No data available.
Dynamic Viscosity:	No data available.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Softening Point:	No data available.
VOC Content (%):	No data available.
Particle Size:	No data available.
Particle Size Distribution:	No data available.

10 Stability and reactivity

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Excessive heat.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

Carbon dioxides.

11 Toxicological information

Information on the likely routes of exposure

Inhalation:	Specific test data for the substance or mixture is not available.
Eye Contact:	Specific test data for the substance or mixture is not available.
Skin Contact:	Specific test data for the substance or mixture is not available.
Ingestion:	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

No information available.

Numerical measures of toxicity (such as acute toxicity estimates)

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Butane 106-97-8	-	-	= 658 g/m ³ (Rat) 4 h
Propane 74-98-6	-	-	= 658 mg/L (Rat) 4 h
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 220 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h

The following values are calculated based on Chapter 3.1 of the GHS document:

ATEmix (oral)

22,318.00 mg/kg

ATEmix (inhalation-dust/mist)

150.00 mg/l

ATEmix (inhalation-vapor)

1,100.00 ATEmix

Interactive effects

Sensitization: No information available.

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
2-butoxyethanol (117-76-2)	A3	Group 3		

ACGIH(American Conference of Governmental Industrial Hygienists)

A3- Animal Carcinogen

IARC(International Agency for Research on Cancer)

Group 2A - Probably carcinogenic to Humans

Group 3 - Not classifiable as to Carcinogenicity in Humans

OSHA(Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive Toxicity:	No information available.
STOT-single exposure:	No information available.
STOT-repeated exposure:	No information available.
Chronic Toxicity	No known effect based in information supplied. Contains a known or suspected carcinogen. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.
Target Organ Effects	Blood. Central Nervous System (CNS). Eyes. Hematopoietic System. Kidney. Liver. Respiratory System. Skin.
Aspiration Hazard:	No information available.

12 Ecological information

Toxicity

Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
2-Butoxyethanol 111-76-2		96h LC50: = 1490 mg/L (Lepomis Macrochirus) 96h LC50: 2950 mg/L (Iepomis Macrochirus)		48h EC50: > 1000 mg/L 24h EC50: 1698 - 1940 mg/L

Persistence and degradability

No information available.

Bioaccumulative potential

Chemical Name	Log Pow
Butane (106-97-8)	2.89
Propane (74-98-6)	2.3
2-butoxyethanol (111-76-2)	0.81

Other adverse effects

No information available.

13 Disposal considerations

Disposal methods

Dispose of contents/containers in accordance with local regulations. This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional or local regulations for additional requirements.

California Hazardous Waste Codes: 561

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14 Transport information

UN Number

TDG:

UN-No	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.2
Description	UN1950, AEROSOLS, 2.2

MEX:

UN-No	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.2
Description	UN1950, AEROSOLS, 2.2

ICAO:

UN-No	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.2
Description	UN1950, AEROSOLS, 2.2

IATA:

UN-No	UN1950
Proper Shipping Name	AEROSOLS, NON-FLAMMABLE
Hazard Class	2.2
Description	UN1950, AEROSOLS, NON-FLAMMABLE, 2.2

IMDG/IMO:

UN-No	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.2
EmS No.	F-D, S-U
Description	UN1950, AEROSOLS, 2.2

RID:

UN-No	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.2
Classification Code	5A
Description	UN1950, AEROSOLS, 2.2

ADR:

UN-No	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.2
Classification Code	5A
Tunnel Restriction Code	(E)
Description	UN1950, AEROSOLS, 2.2

ADN:

UN-No	UN1950
Proper Shipping Name	AEROSOLS
Hazard Class	2.2

Classification Code	5A
Special Provisions	190, 327, 344, 625
Description	UN1950, AEROSOLS, 2.2
Limited Quantity	1 L
Ventilation	VE04

UN Proper Shipping Name

Consumer Commodity

Transport hazard class(es)

ORM-D

15 Regulatory information

Safety, health and environmental regulations specific for the product in question

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.
IECSC	-

US Federal Regulations

SARA 313

Section 313 of the Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
2-Butoxyethanol - 111-76-2	117-76-2	1 - 5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	Yes
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

US State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Butane 106-97-8	X	X	X		
Propane 74-98-6	X	X	X		
2-Butoxyethanol 111-76-2	X	X	X	X	X
Supplier Trade Secret	X	X	X	X	

International Regulations

Mexico

National Occupational Exposure Limits

Component	Carcinogen Status	Exposure Limits
Butane 106-97-8 (1 - 5)		Mexico: TWA 800 ppm Mexico: TWA 1900 mg/m ³
2-Butoxyethanol 111-76-2 (1 - 5)		Mexico: TWA 26 ppm Mexico: TWA 120 mg/m ³ Mexico: tEL 75 ppm Mexico: STEL 360 mg/m ³

Mexico: Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class
D2A - Very toxic materials
A - Compressed gas

16 Other information

Other information

NFPS	Health Hazards 1	Flammability 1	Instability 0	Physical and Chemical Hazards -
HMIS	Health Hazards 1	Flammability 0	Physical Hazard 0	Personal Protection X

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. It is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



SAFETY DATA SHEET

Revision Date 28-Oct-2016

Revision Number 0

This document complies with the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name Hi Spot Blue

Other means of identification

Part Number 83307

Formula Code 8716

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Cleaner

Uses advised against No information available

Supplier's details

Initial Supplier
ITW Permatex Canada
1-35 Brownridge Road
Halton Hills, ON, L7G 0C6
Canada

Supplier Address
ITW PRO BRANDS
805 E. Old 56 Highway
Olathe, KS 66061
TEL: 1-800-443-9536

Emergency telephone number

Emergency Telephone Number 800-535-5053 Infotrac

2. HAZARDS IDENTIFICATION

Classification

This product is considered hazardous according to the criteria set within the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

Carcinogenicity

Category 1B

Label Elements

Danger**Hazard Statements**

May cause cancer

Physical and Health Hazards Not Otherwise Classified

Not applicable.

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.

General Advice

- If exposed or concerned: Get medical attention/advice

Eyes

- None

Skin

- None

Inhalation

- None

Ingestion

- None

Fire

- None

Spills and Leaks

- None

Storage

- Store locked up.

Disposal

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

Other information

13.54232% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Petroleum distillates, hydrotreated middle	64742-46-7	17.7	-	-
Michler's ketone	90-94-8	0.45	-	-

4. FIRST AID MEASURES

Description of necessary first-aid measures

General Advice	Immediate medical attention is required.
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 irritation persists, call a physician.
Skin Contact	Flush with cool water. Wash skin with soap and water. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Obtain medical attention.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

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

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Suitable Extinguishing Media</u>	Carbon dioxide (CO ₂). Foam. Dry chemical. Water fog.
<u>Unsuitable Extinguishing Media</u>	Do not use a solid water stream as it may scatter and spread fire.
<u>Specific Hazards Arising from the Chemical</u>	No information available.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
<u>Protective Equipment and Precautions for Firefighters</u>	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 Use personal protective equipment. Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material. Deny entry to unauthorized and unprotected personnel.

Environmental Precautions

Environmental Precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent from entering into soil, ditches, sewers, waterways, and/ or groundwater.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of children. Keep away from incompatible materials.

Incompatible Products Strong oxidizing agents. Strong acids. Strong reducing agents. Strong alkalis.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection No protective equipment is needed under normal use conditions. If splashes are likely to occur, wear: Chemical splash goggles.

Skin and Body Protection Impervious gloves.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid, Paste.	Appearance	Blue.
Odor	Mild Petroleum.	Odor Threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	No data available	None known
Flash Point	> 93.333 °C / > 200 °F	None known
Evaporation rate		None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	> 1 (air = 1)	None known
Specific Gravity	No data available	None known

Water Solubility	Insoluble in water.	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Not flammable

Explosive Properties No data available

Oxidizing Properties No data available

Other information

VOC Content (%) 0

10. STABILITY AND REACTIVITY

Reactivity No data available.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Heat, flames and sparks. Incompatible products.

Incompatible materials Strong oxidizing agents. Strong acids. Strong reducing agents. Strong alkalis.

Hazardous decomposition products Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye Contact	Contact with eyes may cause irritation.
Skin Contact	May cause irritation.
Ingestion	Ingestion may cause stomach discomfort.

Numerical measures of toxicity - Product

Unknown acute toxicity 13.54232% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 33290 mg/kg; Acute toxicity estimate

LD50 Dermal 40850 mg/kg; Acute toxicity estimate

Inhalation dust/mist 26 mg/L; Acute toxicity estimate

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Petroleum distillates, hydrotreated middle	= 7400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 4.6 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Respiratory or Skin Sensitization No information available.

Germ Cell Mutagenicity No information available.
Carcinogenicity Contains a known or suspected carcinogen. May cause cancer. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Michler's ketone		Group 2B	Reasonably Anticipated	X

IARC: (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Petroleum distillates, hydrotreated middle 64742-46-7		LC50: 35 mg/L Pimephales promelas 96 h flow-through LC50: >10000 mg/L Pimephales promelas 96 h static		

Persistence and Degradability No information available.**Bioaccumulation** No information available.**Mobility** No information available.**Other Adverse Effects** No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with local/regional/national regulations.**Contaminated Packaging** Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated**TDG** Not regulated**MEX** Not regulated

15. REGULATORY INFORMATION

International Regulations

Ozone depleting substances	Not applicable
Persistent Organic Pollutants	Not applicable
Hazardous Waste	Not applicable
The Rotterdam Convention (Prior Informed Consent)	Not applicable
International Convention for the Prevention of Pollution from Ships (MARPOL)	Not applicable

International Inventories

TSCA	Complies
DSL	Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Michler's ketone	90-94-8	0.45	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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.

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Michler's ketone	90-94-8	Carcinogen

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Oleic acid			X		X
Michler's ketone	X	X	X	X	

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION				
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<u>NFPA</u>	Health Hazard 1	Flammability 1	Instability 0	Physical and Chemical Hazards -
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<u>HMIS</u>	Health Hazard 1*	Flammability 1	Physical Hazard 0	Personal Protection X
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*Indicates a chronic health hazard.

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Issuing Date	28-Oct-2016
Revision Date	28-Oct-2016
Revision Note	Initial Release.

General Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet



SAFETY DATA SHEET

Issuing Date 18-Jun-2014

Revision Date 18-Jun-2014

Revision Number 0

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name Hi Spot Blue
Part Number 83307
Formula Code 8716
Contains Michler's ketone

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

Recommended Use Cleaner
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Importer (5511) 4785.2600	Supplier ITW Pro Brands 805 E. Old 56 Highway Olathe, KS 66061 TEL: 1-800-443-9536
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For further information, please contact

E-mail Address cservice@itwprobrands.com

1.4. Emergency telephone number

Emergency Telephone Number 800-535-5053 Infotrac

Europe	112
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Section 2. Hazards identification

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Carcinogenicity	Category 1B
------------------------	-------------

Physical Hazards

None

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases mentioned in this Section, see Section 16

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Symbol(s) T - Toxic
R-code(s) Carc. cat. 2;R45 - R53

2.2. Label Elements

**Signal Word****Danger****Hazard Statements**

H350 - May cause cancer

Precautionary Statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P281 - Use personal protective equipment as required

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

P405 - Store locked up

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

2.3. Other information**Section 3. Composition/information on ingredients****3.1. Substances**

Not applicable

3.2. Mixtures

Chemical Name	EC-No	CAS-No	Weight %	Classification	EU - GHS Substance Classification	REACH No.
Oleic acid	-	112-80-1	10-30	-		No data available
Petroleum distillates, hydrotreated middle	265-148-2	64742-46-7	10-30	R52-53 Xn; R20	Carc. 1B (H350)	No data available
Michler's ketone	202-027-5	90-94-8	<1	Xi; R41 Carc.Cat.2; R45 Muta.Cat.3; R68	Muta. 2 (H341) Carc. 1B (H350) Eye Dam. 1 (H318)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16**For the full text of the H-Statements mentioned in this Section, see Section 16****Section 4. First aid measures****4.1. Description of first-aid measures****General Advice**

Immediate medical attention is required.

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 irritation persists, call a physician.

Skin Contact

Flush with cool water. Wash skin with soap and water. If skin irritation persists, call a physician.

Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Obtain medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

Most Important Symptoms/Effects No information available.

4.3. Indication of immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog. Foam. Carbon dioxide (CO₂). Dry chemical.

Extinguishing media which must not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

None in particular.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material. Deny entry to unauthorized and unprotected personnel.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent from entering into soil, ditches, sewers, waterways, and/ or groundwater.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

6.4. Reference to other sections

See Section 12 for additional information.

Section 7. Handling and storage

7.1. Precautions for Safe Handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Hygiene Measures

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

7.2. Conditions for safe storage, including any incompatibilities

Keep out of the reach of children. Keep away from open flames, hot surfaces and sources of ignition. Store away from incompatible materials. See Section 10 for Incompatibles.

7.3. Specific end use(s)**Exposure Scenario**

No information available.

Other Guidelines

No information available.

Section 8. Exposure controls/personal protection
8.1. Control parameters**Exposure Limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Derived No Effect Level

No information available

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls**Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye Protection**

No protective equipment is needed under normal use conditions. If splashes are likely to occur, wear: Chemical splash goggles.

Skin and Body Protection

No special protective equipment required.

Hand Protection

Impervious gloves.

Respiratory Protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Environmental Exposure Controls

No information available.

Section 9. Physical and chemical properties
9.1. Information on basic physical and chemical properties**Physical State**

Liquid, Paste.

Appearance

Blue

Odor

Mild Petroleum.

Property**Values****Remarks/ - Method****pH**

No data available

None known

Melting Point/Range

No data available

None known

Boiling Point/Boiling Range

No data available

None known

Flash Point

> 93.333 °C / > 200 °F

None known

Evaporation rate

> 1 (BuAc = 1)

None known

Flammability (solid, gas)

No data available

None known

Vapor Pressure	No data available	None known
Vapor Density	> 1 (air = 1)	None known
Relative Density	0.95	None known
Water Solubility	Insoluble in water.	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

VOC Content (%)	0
Flammability Limits in Air	No information available.

Section 10. Stability and reactivity**10.1. Reactivity**

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks. Incompatible products.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Strong reducing agents. Strong alkalis.

10.6. Hazardous decomposition products

Carbon oxides.

Section 11. Toxicological information**11.1.****Acute Toxicity****Product Information****Inhalation**

May cause irritation of respiratory tract.

Eye Contact

Contact with eyes may cause irritation.

Skin Contact

May cause irritation.

Ingestion

Ingestion may cause stomach discomfort.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Oleic acid	= 25 g/kg (Rat)		
Petroleum distillates, hydrotreated middle	= 7400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 4.6 mg/L (Rat) 4 h

Sensitization

No information available.

Mutagenic Effects

No information available.

Carcinogenic Effects

May cause cancer. The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	EU Annex I Carcinogen Information	UK
Petroleum distillates, hydrotreated middle	Category 2	
Michler's ketone	Category 2	

Reproductive Toxicity	No information available.
Developmental Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration Hazard	No information available.

Section 12. Ecological information

12.1. Toxicity

Ecotoxicity Effects

May cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Oleic acid		LC50 96 h: = 205 mg/L static (Pimephales promelas)		
Petroleum distillates, hydrotreated middle		LC50: 35 mg/L Pimephales promelas 96 h flow-through LC50: >10000 mg/L Pimephales promelas 96 h static		

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential.

No information available.

12.4. Mobility in soil

Adsorbs on soil.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

This product does not contain any known or suspected endocrine disruptors.

Section 13. Disposal considerations

13.1. Waste treatment methods

Waste from Residues / Unused Products

Dispose of in accordance with local regulations.

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other Information

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14. Transport information
IMDG/IMO

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Marine Pollutant	None.
14.6. Special Provisions	None.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available.

RID

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

ADR

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

ICAO

14.1. UN-Number	Not regulated.
14.2. Proper shipping name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

IATA

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

Section 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**International Inventories**

TSCA	Complies
EINECS/ELINCS	-
DSL/NDSL	Complies
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical Safety Assessment

No information available

Section 16. Other information**Full text of R-phrases referred to under Sections 2 and 3**

R20 - Harmful by inhalation

R45 - May cause cancer

R68 - Possible risk of irreversible effects

R41 - Risk of serious damage to eyes

R53 - May cause long-term adverse effects in the aquatic environment

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3

H350 - May cause cancer if swallowed

H341 - Suspected of causing genetic defects if inhaled

H318 - Causes serious eye damage

Key literature references and sources for data

www.ChemADVISOR.com/

Issuing Date 18-Jun-2014

Revision Date 18-Jun-2014

Revision Note Initial Release.

This safety data sheet complies with the requirements of Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006

General Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Safety Data Sheet



1. Identification

Product Name:	HPERF LSPR 6PK GLOSS ORANGE FL. MARKING	Revision Date:	8/6/2018
Product Identifier:	V2355838	Supersedes Date:	3/14/2018
Recommended Use:	Marking Paint/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
	Rust-Oleum Canada (ROCA) 200 Confederation Parkway Concord, ON L4K 4T8 Canada Emergency Phone: 800-387-3625		
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word

Danger

Possible Hazards

48% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	For specific treatment see label

GHS SDS PRECAUTIONARY STATEMENTS

P363 Wash contaminated clothing before reuse.

3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt.%</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	19	GHS08	H304
Propane	74-98-6	17	GHS04	H280
Hydrous Magnesium Silicate	14807-96-6	8.6	Not Available	Not Available
n-Butane	106-97-8	8.0	GHS04	H280
Acetone	67-64-1	7.2	GHS02-GHS07	H225-319-332-336
n-Butyl Acetate	123-86-4	3.6	GHS02-GHS07	H226-336

Hydrotreated Light Distillate	64742-47-8	3.2	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	1.5	GHS02-GHS07	H226-315-319-332
Stoddard Solvent	8052-41-3	0.9	GHS08	H304-372
Ethylbenzene	100-41-4	0.4	GHS02-GHS07- GHS08	H225-304-332-351-373
Pigment Orange 13	3520-72-7	0.4	Not Available	Not Available
Methyl ethyl ketoxime	96-29-7	0.1	GHS05-GHS06- GHS08	H302-312-317-318-331-351

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: 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, 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. 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. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. 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: 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. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL- TWA	OSHA PEL- CEILING
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	20.0	N.E.	N.E.	N.E.	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Hydrous Magnesium Silicate	14807-96-6	10.0	2 mg/m3	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Acetone	67-64-1	10.0	250 ppm	500 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	5.0	50 ppm	150 ppm	150 ppm	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Pigment Orange 13	3520-72-7	1.0	N.E.	N.E.	N.E.	N.E.
Methyl ethyl ketoxime	96-29-7	1.0	10 ppm	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: 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. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use 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:	0.870	pH:	N.A.
Freeze Point, °C:	N.D.	Viscosity:	N.D.
Solubility in Water:	Slight	Partition Coefficient, n- octanol/water:	N.D.
Decomposition Temp., °C:	N.D.	Explosive Limits, vol%:	0.9 - 13.0
Boiling Range, °C:	-37 - 537	Flash Point, °C:	-96
Flammability:	Supports Combustion	Auto-ignition Temp., °C:	N.D.
Evaporation Rate:	Faster than Ether	Vapor Pressure:	N.D.
Vapor Density:	Heavier than Air		

(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 cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

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

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
14807-96-6	Hydrous Magnesium Silicate	6000	N.E.	30
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
3520-72-7	Pigment Orange 13	>5000 mg/kg Rat	N.E.	N.E.
96-29-7	Methyl ethyl ketoxime	930 mg/kg Rat	1100 mg/kg Rabbit	>4.8 mg/L Rat

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

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

	<u>Domestic (USDOT)</u>	<u>International (IMDG)</u>	<u>Air (IATA)</u>	<u>TDG (Canada)</u>
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:**CERCLA - SARA Hazard Category**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Gas under pressure, Carcinogenicity, Respiratory or Skin Sensitization

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:

<u>Chemical Name</u>	<u>CAS-No.</u>
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

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:

<u>Chemical Name</u>	<u>CAS-No.</u>
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information**HMIS RATINGS**

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA RATINGS

Health: 2 Flammability: 4 Instability: 0

Volatile Organic Compounds 524 g/L

SDS REVISION DATE: 8/6/2018

REASON FOR REVISION: Substance Chemical Name Changed
 Substance and/or Product Properties Changed in Section(s):
 02 - Hazard Identification
 03 - Composition/Information on Ingredients
 15 - Regulatory Information
 16 - Other Information
 Revision Statement(s) Changed

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

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet



1. Identification

Product Name:	HPERF LSPR 6PK GLOSS RED-ORG FL MARKING	Revision Date:	8/6/2018
Product Identifier:	V2358838	Supersedes Date:	3/14/2018
Recommended Use:	Marking Paint/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
	Rust-Oleum Canada (ROCA) 200 Confederation Parkway Concord, ON L4K 4T8 Canada Emergency Phone: 800-387-3625		
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word

Danger

Possible Hazards

48% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	For specific treatment see label

GHS SDS PRECAUTIONARY STATEMENTS

P363 Wash contaminated clothing before reuse.

3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt.%</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	19	GHS08	H304
Propane	74-98-6	17	GHS04	H280
Hydrous Magnesium Silicate	14807-96-6	8.7	Not Available	Not Available
n-Butane	106-97-8	8.0	GHS04	H280
Acetone	67-64-1	7.3	GHS02-GHS07	H225-319-332-336
n-Butyl Acetate	123-86-4	3.6	GHS02-GHS07	H226-336

Hydrotreated Light Distillate	64742-47-8	3.1	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	1.6	GHS02-GHS07	H226-315-319-332
Ethylbenzene	100-41-4	0.4	GHS02-GHS07- GHS08	H225-304-332-351-373
Stoddard Solvent	8052-41-3	0.2	GHS08	H304-372
Methyl ethyl ketoxime	96-29-7	0.1	GHS05-GHS06- GHS08	H302-312-317-318-331-351

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: 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, 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. 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. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. 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: 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. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL- TWA	OSHA PEL- CEILING
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	20.0	N.E.	N.E.	N.E.	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Hydrous Magnesium Silicate	14807-96-6	10.0	2 mg/m ³	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Acetone	67-64-1	10.0	250 ppm	500 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	5.0	50 ppm	150 ppm	150 ppm	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Methyl ethyl ketoxime	96-29-7	1.0	10 ppm	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: 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. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use 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:	0.870	pH:	N.A.
Freeze Point, °C:	N.D.	Viscosity:	N.D.
Solubility in Water:	Slight	Partition Coefficient, n- octanol/water:	N.D.
Decomposition Temp., °C:	N.D.	Explosive Limits, vol%:	0.9 - 13.0
Boiling Range, °C:	-37 - 537	Flash Point, °C:	-96
Flammability:	Supports Combustion	Auto-ignition Temp., °C:	N.D.
Evaporation Rate:	Faster than Ether	Vapor Pressure:	N.D.
Vapor Density:	Heavier than Air		

(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 alkalis.

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 cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

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

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
14807-96-6	Hydrous Magnesium Silicate	6000	N.E.	30
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
96-29-7	Methyl ethyl ketoxime	930 mg/kg Rat	1100 mg/kg Rabbit	>4.8 mg/L Rat

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

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

	<u>Domestic (USDOT)</u>	<u>International (IMDG)</u>	<u>Air (IATA)</u>	<u>TDG (Canada)</u>
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:**CERCLA - SARA Hazard Category**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Gas under pressure, Carcinogenicity, Respiratory or Skin Sensitization

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:

<u>Chemical Name</u>	<u>CAS-No.</u>
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

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:

<u>Chemical Name</u>	<u>CAS-No.</u>
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information**HMIS RATINGS**

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA RATINGS

Health: 2 Flammability: 4 Instability: 0

Volatile Organic Compounds 524 g/L

SDS REVISION DATE: 8/6/2018

REASON FOR REVISION: Substance Chemical Name Changed
 Substance and/or Product Properties Changed in Section(s):
 02 - Hazard Identification
 03 - Composition/Information on Ingredients
 15 - Regulatory Information
 16 - Other Information
 Revision Statement(s) Changed

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

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet



1. Identification

Product Name:	HPERF LSPR 6PK GLOSS RED-ORG FL MARKING	Revision Date:	8/6/2018
Product Identifier:	V2358838	Supersedes Date:	3/14/2018
Recommended Use:	Marking Paint/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
	Rust-Oleum Canada (ROCA) 200 Confederation Parkway Concord, ON L4K 4T8 Canada Emergency Phone: 800-387-3625		
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word

Danger

Possible Hazards

48% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	For specific treatment see label

GHS SDS PRECAUTIONARY STATEMENTS

P363 Wash contaminated clothing before reuse.

3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt.%</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	19	GHS08	H304
Propane	74-98-6	17	GHS04	H280
Hydrous Magnesium Silicate	14807-96-6	8.7	Not Available	Not Available
n-Butane	106-97-8	8.0	GHS04	H280
Acetone	67-64-1	7.3	GHS02-GHS07	H225-319-332-336
n-Butyl Acetate	123-86-4	3.6	GHS02-GHS07	H226-336

Hydrotreated Light Distillate	64742-47-8	3.1	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	1.6	GHS02-GHS07	H226-315-319-332
Ethylbenzene	100-41-4	0.4	GHS02-GHS07- GHS08	H225-304-332-351-373
Stoddard Solvent	8052-41-3	0.2	GHS08	H304-372
Methyl ethyl ketoxime	96-29-7	0.1	GHS05-GHS06- GHS08	H302-312-317-318-331-351

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: 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, 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. 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. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. 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: 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. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL- TWA	OSHA PEL- CEILING
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	20.0	N.E.	N.E.	N.E.	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Hydrous Magnesium Silicate	14807-96-6	10.0	2 mg/m ³	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Acetone	67-64-1	10.0	250 ppm	500 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	5.0	50 ppm	150 ppm	150 ppm	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Methyl ethyl ketoxime	96-29-7	1.0	10 ppm	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: 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. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use 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:	0.870	pH:	N.A.
Freeze Point, °C:	N.D.	Viscosity:	N.D.
Solubility in Water:	Slight	Partition Coefficient, n- octanol/water:	N.D.
Decomposition Temp., °C:	N.D.	Explosive Limits, vol%:	0.9 - 13.0
Boiling Range, °C:	-37 - 537	Flash Point, °C:	-96
Flammability:	Supports Combustion	Auto-ignition Temp., °C:	N.D.
Evaporation Rate:	Faster than Ether	Vapor Pressure:	N.D.
Vapor Density:	Heavier than Air		

(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 alkalis.

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 cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

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

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
14807-96-6	Hydrous Magnesium Silicate	6000	N.E.	30
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
96-29-7	Methyl ethyl ketoxime	930 mg/kg Rat	1100 mg/kg Rabbit	>4.8 mg/L Rat

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

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

	<u>Domestic (USDOT)</u>	<u>International (IMDG)</u>	<u>Air (IATA)</u>	<u>TDG (Canada)</u>
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:**CERCLA - SARA Hazard Category**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Gas under pressure, Carcinogenicity, Respiratory or Skin Sensitization

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:

<u>Chemical Name</u>	<u>CAS-No.</u>
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

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:

<u>Chemical Name</u>	<u>CAS-No.</u>
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information**HMIS RATINGS**

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA RATINGS

Health: 2 Flammability: 4 Instability: 0

Volatile Organic Compounds 524 g/L

SDS REVISION DATE: 8/6/2018

REASON FOR REVISION: Substance Chemical Name Changed
 Substance and/or Product Properties Changed in Section(s):
 02 - Hazard Identification
 03 - Composition/Information on Ingredients
 15 - Regulatory Information
 16 - Other Information
 Revision Statement(s) Changed

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

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.



Safety Data Sheet

Issue Date 12-Aug-2013

Revision Date: 01-Oct-2017

Version 1

1. IDENTIFICATION

Product Identifier

Product Name

Industrial Grade Silicone – Acetoxy Cure – Clear, White & Colors

Other means of identification

SDS #

RD-0080A

Product Code

08160I, 08260I Series

Recommended use of the chemical and restrictions on use

Recommended Use

Silicone Sealant.

Details of the supplier of the safety data sheet

Supplier Address

Red Devil, Inc.
4175 Webb Street
Pryor, Oklahoma 74361
www.reddevil.com

Emergency Telephone Number

Company Phone Number

918-825-5744

Fax: 918-825-5761

Emergency Telephone (24 hr)

INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

Signal Word

Warning

Hazard Statements

Causes skin irritation

Causes serious eye irritation



Appearance Clear/opaque or colored paste

Physical State Paste

Odor Acetic Acid Odor (Vinegar odor)

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

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 ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Hydroxy-terminated Dimethyl siloxane	70131-67-8	>50
Non-hazardous ingredients *	Proprietary	>10
Amorphous silica (glass)	7631-86-9	<13
Polydimethylsiloxane	63148-62-9	<10
Methyltriacetoxysilane	4253-34-3	<6
Titanium Dioxide	13463-67-7	<5
Ethyltriacetoxysilane	17689-77-9	<6

* Unlisted ingredients are not considered hazardous under the OSHA GHS Hazard Communication Standard (29 CFR 1910.1200). (Methyltriacetoxysilane) Observe limits for acetic acid formed during curing on exposure to water or humid air. (Silica, amorphous; Titanium Dioxide) Inhalation of particulates unlikely due to product's physical state.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.
Skin Contact	No health effects expected. If irritation does occur, flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
Inhalation	If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
Ingestion	Rinse mouth thoroughly with water. If irritation or discomfort occurs, obtain medical advice.

Most important symptoms and effects

Symptoms	Causes skin irritation. May cause nose, throat & respiratory tract irritation. Direct contact with eyes may cause temporary irritation.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat according to person’s condition & specifics of exposure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Small Fire Use carbon dioxide (CO2), dry chemical or water spray.

Large Fire Use dry chemical, foam or water spray.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Not determined.

Hazardous Combustion Products Carbon oxides & traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

Protective equipment and precautions for firefighters

Self-contained breathing apparatus & protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Observe all personal protection equipment recommendations described in Sections 5 & 8.

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. Use absorbent material to contain spill.

Methods for Clean-Up Wipe up or scrape up & contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state & federal laws & regulations may apply to releases & disposal of this material as well as those materials & items employed in the cleanup of releases. You will need to determine which federal, state & local laws & regulations are applicable. Sections 13 & 15 of this SDS provide information regarding certain federal & state requirements.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Wash face, hands, and any exposed skin thoroughly after handling. Use personal protection recommended in Section 8. Use only in well-ventilated areas. Avoid contact with skin and eyes. Product evolves acetic acid (HOAc) when exposed to water or humid air.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep container closed & store away from water or moisture.
- Incompatible Materials** Oxidizing material can cause a reaction. Water, moisture or humid air can cause hazardous vapors to form as described in Section 8.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines Exposure guidelines / protective equipment are for routine handling and accidental spills

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Amorphous silica (glass) 7631-86-9	-	(vacated) TWA: 6 mg/m ³ <1% Crystalline silica TWA: 20 mppcf : (80)/(% SiO ₂) mg/m ³ TWA	IDLH: 3000 mg/m ³ TWA: 6 mg/m ³
Titanium Dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³

Other Information Acetic acid is formed upon contact w/ water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm & ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

Appropriate engineering controls

Engineering Controls Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Good general ventilation should be sufficient.

Individual protection measures, such as personal protective equipment

- Eye/Face Protection** Safety glasses as a minimum for protection.
- Skin and Body Protection** Wear suitable protective clothing.
- Respiratory Protection** No special equipment needed.

General Hygiene Considerations Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. Handle in accordance with good industrial hygiene and safety practice. Wash @ mealtime & end of shift. Contaminated clothing & shoes should be removed as soon as practical & thoroughly cleaned before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Paste	Odor	Acetic Acid Odor (Vinegar odor)
Appearance	Clear/opaque or colored paste	Odor Threshold	Not determined
Color	Various	Remarks • Method	
Property	Values		
pH	Not determined		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	Not determined		
Flash Point	Not applicable		
Evaporation Rate	Not determined		

Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	~1.04	@ 25 °C (77 °F)
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
Additional Information	Note: The above information is not intended for use in preparing product specifications	
VOC Content (%)	< 3%/wt (< 40 g/L)	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Incompatible Materials.

Incompatible Materials

Oxidizing material can cause a reaction. Water, moisture or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides & traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde, Nitrogen oxides & metal oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact

Causes serious eye irritation.

Skin Contact

Causes skin irritation. Can be absorbed through the skin.

Inhalation

May cause irritation of respiratory tract.

Ingestion

Can be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Amorphous silica (glass) 7631-86-9	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
Polydimethylsiloxane 63148-62-9	> 17 g/kg (Rat)	> 2 g/kg (Rabbit)	-
Methyltriacetoxysilane 4253-34-3	= 2060 mg/kg (Rat)	-	-
Titanium Dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects**Symptoms**

Please see section 4 of this SDS for symptoms.

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

The table below indicates whether each agency has listed any ingredient as a carcinogen. Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Amorphous silica (glass) 7631-86-9		Group 3		
Titanium Dioxide 13463-67-7		Group 2B		X

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 IARC components are "not classifiable as human carcinogens"

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION**Ecotoxicity**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Amorphous silica (glass) 7631-86-9	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static		7600: 48 h Ceriodaphnia dubia mg/L EC50

Persistence/Degradability

Complete information is not yet available

Bioaccumulation

Complete information is not yet available

Mobility

Complete information is not yet available

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

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

14. TRANSPORT INFORMATION

Note	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
DOT	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. REGULATORY INFORMATION

International Inventories

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*

US Federal Regulations

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

SARA 313

Not determined

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Titanium Dioxide - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Amorphous silica (glass) 7631-86-9	X	X	X
Titanium Dioxide 13463-67-7	X	X	X

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	1	1	0	Not determined
HMIS	Health Hazards	Flammability	Physical Hazards	Personal Protection
	1	0	0	B- Safety Glasses, Gloves

Issue Date: 12-Aug-2013
 Revision Date: 01-Oct-2017
 Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Revision Number: 001.3

Issue date: 05/08/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Loctite General Performance Spray Adhesive	IDH number:	2235316
Product type:	Adhesive	Region:	United States
Restriction of Use:	None identified	Contact information:	Telephone: +1 (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
Company address:	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: EXTREMELY FLAMMABLE AEROSOL.
CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.
CAUSES SKIN IRRITATION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE AEROSOL	1
GASES UNDER PRESSURE	Compr. Gas
SKIN IRRITATION	2
EYE IRRITATION	2A
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 affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response: IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: 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*
Methyl acetate	79-20-9	20 - 30
Acetone	67-64-1	10 - 20
Dimethyl ether	115-10-6	10 - 20
1,1-Difluoroethane	75-37-6	1 - 10
Heptane, branched, cyclic and linear	426260-76-6	1 - 10
Naphtha, hydrotreated light, <0,1% benzene	64742-49-0	1 - 10
Propane	74-98-6	1 - 10
Cyclohexane	110-82-7	0.1 - 1
Acetaldehyde	75-07-0	0 - 0.1
Naphthalene	91-20-3	0 - 0.1
Methanol	67-56-1	0 - 0.1

* 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. In case of adverse health effects seek medical advice.
Skin contact:	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. If vomiting occurs, prevent aspiration by keeping the patient's head below the knees.
Symptoms:	See Section 11.
Notes to physician:	This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Firefighters should wear self-contained breathing apparatus. Water may be ineffective, but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.
Unusual fire or explosion hazards:	Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture or incinerate pressurized containers. Exposure to temperatures above 49°C (120°F) may cause container to burst.

Hazardous combustion products: Not available.

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: Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Follow all local, state, federal and provincial regulations for disposal.

7. HANDLING AND STORAGE

Handling: Keep out of the reach of children. Keep in a cool, well ventilated area. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains. Do not puncture or incinerate pressurized containers.

Storage: For safe storage, store at or below 50 °C (122°F) Keep away from heat, spark and flame. Store in a cool, dry, well-ventilated area.

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
Methyl acetate	200 ppm TWA 250 ppm STEL	200 ppm (610 mg/m3) PEL	None	None
Acetone	250 ppm TWA 500 ppm STEL	1,000 ppm (2,400 mg/m3) PEL	None	None
Dimethyl ether	None	None	1,000 ppm (1,880 mg/m3) TWA	None
1,1-Difluoroethane	None	None	1,000 ppm (2,700 mg/m3) TWA	None
Heptane, branched, cyclic and linear	400 ppm TWA 500 ppm STEL	500 ppm (2,000 mg/m3) PEL	None	None
Naphtha, hydrotreated light, <0,1% benzene	None	100 ppm (400 mg/m3) PEL	None	None
Propane	Included in the regulation but with no data values. See regulation for further details (Simple asphyxiant.)	1,000 ppm (1,800 mg/m3) PEL	None	None
Cyclohexane	100 ppm TWA	300 ppm (1,050 mg/m3) PEL	None	None
Acetaldehyde	25 ppm Ceiling	200 ppm (360 mg/m3) PEL	None	None
Naphthalene	10 ppm TWA (SKIN)	10 ppm (50 mg/m3) PEL	None	None
Methanol	200 ppm TWA (SKIN) 250 ppm STEL	200 ppm (260 mg/m3) PEL	None	None

Engineering controls:	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.
Respiratory protection:	If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
Eye/face protection:	Safety goggles or safety glasses with side shields.
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Aerosol
Color:	No information available.
Odor:	Not available.
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	52 °C (125.6 °F)
Melting point/ range:	Not available.
Vapor density:	Not available.
Flash point:	-104.4 °C (-155.92 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not applicable
Flammability:	Extremely flammable aerosol.
Evaporation rate:	Not available.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	28.1 % (by weight, calculated using CARB method; g/L less water, less exempts calculated using SCAQMD method)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Not available.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
-------------------------------------	------------------------

Potential Health Effects/Symptoms

Inhalation:	May be harmful if inhaled. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
Skin contact:	Prolonged and/or repeated skin contact may result in mild irritation or redness. Repeated or prolonged contact can result in drying of skin. Symptoms may include redness, burning, drying, cracking and skin burns.
Eye contact:	Symptoms can include irritation, redness, scratching of the cornea, and tearing. Mild eye irritation.
Ingestion:	May be harmful if swallowed. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Methyl acetate	Oral LD50 (Rabbit) = 3.7 g/kg	Blood, Central nervous system, Eyes, Irritant
Acetone	Oral LD50 (Mouse) = 5.2 g/kg Oral LD50 (Mouse) = 3,000 mg/kg 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, 4 h) = 76 mg/l	Central nervous system, Irritant
Dimethyl ether	Inhalation LC50 (Rat, 4 h) = 308.5 mg/l	Irritant, Central nervous system
1,1-Difluoroethane	None	Cardiac, Central nervous system, Developmental, Irritant, Respiratory
Heptane, branched, cyclic and linear	None	Irritant, Central nervous system
Naphtha, hydrotreated light, <0,1% benzene	None	Central nervous system, Irritant, Kidney, Lung
Propane	None	Cardiac, Central nervous system, Irritant
Cyclohexane	Oral LD50 (Rat) = 29,820 mg/kg Oral LD50 (Mouse) = 1,300 mg/kg	Irritant, Central nervous system
Acetaldehyde	Oral LD50 (Mouse) = 1,230 mg/kg Oral LD50 (Rat) = 661 mg/kg Oral LD50 (Rat) = 1,930 mg/kg Oral LD50 (Rat) = 1,930 mg/kg Oral LD50 (Rat) = 661 mg/kg Oral LD50 (Mouse) = 1,230 mg/kg Dermal LD50 (Rabbit) = 3,540 mg/kg Dermal LD50 (Rabbit) = 3,540 mg/kg Inhalation LC50 (Rat, 4 h) = 24 mg/l	Allergen, Central nervous system, Irritant, Mutagen, Respiratory, Some evidence of carcinogenicity, Less weight gain and food intake.
Naphthalene	Oral LD50 (Rat) = 490 mg/kg Oral LD50 (Rat) = 2.6 g/kg Oral LD50 (Rat) = 2,200 mg/kg Oral LD50 (Rat) = 2,400 mg/kg Dermal LD50 (Rat) = > 20 g/kg Dermal LD50 (Rabbit) = > 2.0 g/kg	Blood, Central nervous system, Eyes, Irritant
Methanol	Oral LD50 (Rat) = 5,628 mg/kg Oral LD50 (Mouse) = 7,300 mg/kg Oral LD50 (Rabbit) = 14.4 g/kg Dermal LD50 (Rabbit) = 15,800 mg/kg Inhalation LC50 (Rat, 4 h) = 64000 ppm	Eyes, Irritant, Metabolic, Nervous System

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Methyl acetate	No	No	No
Acetone	No	No	No
Dimethyl ether	No	No	No
1,1-Difluoroethane	No	No	No
Heptane, branched, cyclic and linear	No	No	No
Naphtha, hydrotreated light, <0,1% benzene	No	No	No
Propane	No	No	No
Cyclohexane	No	No	No
Acetaldehyde	Reasonably Anticipated to be	Group 2B	No

	a Human Carcinogen.		
Naphthalene	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No
Methanol	No	No	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: 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
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 (Heptanes)
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Marine pollutant: Heptanes

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). Cyclohexane (CAS# 110-82-7).

California Proposition 65:

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

Canada Regulatory Information

CEPA DSL/NDL Status:

One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: This Safety Data Sheet contains changes from the previous version in Section(s): 2,16

Prepared by: Product Safety and Regulatory Affairs

Issue date: 05/08/2018

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Revision Number: 001.3

Issue date: 05/08/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Loctite General Performance Spray Adhesive	IDH number:	2235316
Product type:	Adhesive	Region:	United States
Restriction of Use:	None identified	Contact information:	Telephone: +1 (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
Company address:	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: EXTREMELY FLAMMABLE AEROSOL.
CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.
CAUSES SKIN IRRITATION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE AEROSOL	1
GASES UNDER PRESSURE	Compr. Gas
SKIN IRRITATION	2
EYE IRRITATION	2A
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 affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response: IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: 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*
Methyl acetate	79-20-9	20 - 30
Acetone	67-64-1	10 - 20
Dimethyl ether	115-10-6	10 - 20
1,1-Difluoroethane	75-37-6	1 - 10
Heptane, branched, cyclic and linear	426260-76-6	1 - 10
Naphtha, hydrotreated light, <0,1% benzene	64742-49-0	1 - 10
Propane	74-98-6	1 - 10
Cyclohexane	110-82-7	0.1 - 1
Acetaldehyde	75-07-0	0 - 0.1
Naphthalene	91-20-3	0 - 0.1
Methanol	67-56-1	0 - 0.1

* 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. In case of adverse health effects seek medical advice.
Skin contact:	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. If vomiting occurs, prevent aspiration by keeping the patient's head below the knees.
Symptoms:	See Section 11.
Notes to physician:	This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Firefighters should wear self-contained breathing apparatus. Water may be ineffective, but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.
Unusual fire or explosion hazards:	Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture or incinerate pressurized containers. Exposure to temperatures above 49°C (120°F) may cause container to burst.

Hazardous combustion products: Not available.

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: Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Follow all local, state, federal and provincial regulations for disposal.

7. HANDLING AND STORAGE

Handling: Keep out of the reach of children. Keep in a cool, well ventilated area. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains. Do not puncture or incinerate pressurized containers.

Storage: For safe storage, store at or below 50 °C (122°F) Keep away from heat, spark and flame. Store in a cool, dry, well-ventilated area.

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
Methyl acetate	200 ppm TWA 250 ppm STEL	200 ppm (610 mg/m3) PEL	None	None
Acetone	250 ppm TWA 500 ppm STEL	1,000 ppm (2,400 mg/m3) PEL	None	None
Dimethyl ether	None	None	1,000 ppm (1,880 mg/m3) TWA	None
1,1-Difluoroethane	None	None	1,000 ppm (2,700 mg/m3) TWA	None
Heptane, branched, cyclic and linear	400 ppm TWA 500 ppm STEL	500 ppm (2,000 mg/m3) PEL	None	None
Naphtha, hydrotreated light, <0,1% benzene	None	100 ppm (400 mg/m3) PEL	None	None
Propane	Included in the regulation but with no data values. See regulation for further details (Simple asphyxiant.)	1,000 ppm (1,800 mg/m3) PEL	None	None
Cyclohexane	100 ppm TWA	300 ppm (1,050 mg/m3) PEL	None	None
Acetaldehyde	25 ppm Ceiling	200 ppm (360 mg/m3) PEL	None	None
Naphthalene	10 ppm TWA (SKIN)	10 ppm (50 mg/m3) PEL	None	None
Methanol	200 ppm TWA (SKIN) 250 ppm STEL	200 ppm (260 mg/m3) PEL	None	None

Engineering controls:	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.
Respiratory protection:	If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
Eye/face protection:	Safety goggles or safety glasses with side shields.
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Aerosol
Color:	No information available.
Odor:	Not available.
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	52 °C (125.6 °F)
Melting point/ range:	Not available.
Vapor density:	Not available.
Flash point:	-104.4 °C (-155.92 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not applicable
Flammability:	Extremely flammable aerosol.
Evaporation rate:	Not available.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	28.1 % (by weight, calculated using CARB method; g/L less water, less exempts calculated using SCAQMD method)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Not available.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
-------------------------------------	------------------------

Potential Health Effects/Symptoms

Inhalation: May be harmful if inhaled. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact may result in mild irritation or redness. Repeated or prolonged contact can result in drying of skin. Symptoms may include redness, burning, drying, cracking and skin burns.

Eye contact: Symptoms can include irritation, redness, scratching of the cornea, and tearing. Mild eye irritation.

Ingestion: May be harmful if swallowed. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Methyl acetate	Oral LD50 (Rabbit) = 3.7 g/kg	Blood, Central nervous system, Eyes, Irritant
Acetone	Oral LD50 (Mouse) = 5.2 g/kg Oral LD50 (Mouse) = 3,000 mg/kg 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, 4 h) = 76 mg/l	Central nervous system, Irritant
Dimethyl ether	Inhalation LC50 (Rat, 4 h) = 308.5 mg/l	Irritant, Central nervous system
1,1-Difluoroethane	None	Cardiac, Central nervous system, Developmental, Irritant, Respiratory
Heptane, branched, cyclic and linear	None	Irritant, Central nervous system
Naphtha, hydrotreated light, <0,1% benzene	None	Central nervous system, Irritant, Kidney, Lung
Propane	None	Cardiac, Central nervous system, Irritant
Cyclohexane	Oral LD50 (Rat) = 29,820 mg/kg Oral LD50 (Mouse) = 1,300 mg/kg	Irritant, Central nervous system
Acetaldehyde	Oral LD50 (Mouse) = 1,230 mg/kg Oral LD50 (Rat) = 661 mg/kg Oral LD50 (Rat) = 1,930 mg/kg Oral LD50 (Rat) = 1,930 mg/kg Oral LD50 (Rat) = 661 mg/kg Oral LD50 (Mouse) = 1,230 mg/kg Dermal LD50 (Rabbit) = 3,540 mg/kg Dermal LD50 (Rabbit) = 3,540 mg/kg Inhalation LC50 (Rat, 4 h) = 24 mg/l	Allergen, Central nervous system, Irritant, Mutagen, Respiratory, Some evidence of carcinogenicity, Less weight gain and food intake.
Naphthalene	Oral LD50 (Rat) = 490 mg/kg Oral LD50 (Rat) = 2.6 g/kg Oral LD50 (Rat) = 2,200 mg/kg Oral LD50 (Rat) = 2,400 mg/kg Dermal LD50 (Rat) = > 20 g/kg Dermal LD50 (Rabbit) = > 2.0 g/kg	Blood, Central nervous system, Eyes, Irritant
Methanol	Oral LD50 (Rat) = 5,628 mg/kg Oral LD50 (Mouse) = 7,300 mg/kg Oral LD50 (Rabbit) = 14.4 g/kg Dermal LD50 (Rabbit) = 15,800 mg/kg Inhalation LC50 (Rat, 4 h) = 64000 ppm	Eyes, Irritant, Metabolic, Nervous System

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Methyl acetate	No	No	No
Acetone	No	No	No
Dimethyl ether	No	No	No
1,1-Difluoroethane	No	No	No
Heptane, branched, cyclic and linear	No	No	No
Naphtha, hydrotreated light, <0,1% benzene	No	No	No
Propane	No	No	No
Cyclohexane	No	No	No
Acetaldehyde	Reasonably Anticipated to be	Group 2B	No

	a Human Carcinogen.		
Naphthalene	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No
Methanol	No	No	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: 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
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 (Heptanes)
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Marine pollutant: Heptanes

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). Cyclohexane (CAS# 110-82-7).

California Proposition 65:

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

Canada Regulatory Information

CEPA DSL/NDL Status:

One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: This Safety Data Sheet contains changes from the previous version in Section(s): 2,16

Prepared by: Product Safety and Regulatory Affairs

Issue date: 05/08/2018

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.



MARVEL OIL CO., INC.
2250 W. Pinehurst Blvd., STE 150
Addison, IL 60101

SAFETY DATA SHEET

1. Product and Company Identification

1.1 Product Identifier

Product Name: Marvel Air Tool Oil
Product Code (SKU): MM85R1 (50100), MM080R (50093) - See Section 15 for discontinued SKU's

1.2 Relevant Identified Uses Of The Substance

Product Use: Engine Oil Additive – Fuel additive (EPA Registered)

1.3 Details of the Supplier of the SDS

Company Name: Marvel Oil Company, Inc.
Street Address: 2250 W. Pinehurst Blvd., Suite 150
City, State, Zip Code: Addison, IL 60101

1.4 Emergency Telephone Numbers

Phone Number: 1(630)455-3700
Fax Number: 1(630)455-3868
Transportation: 1(800)424-9300 (CHEMTREC)
Medical Assistance: Call your local Poison Control Center

2. Hazard Identification:

2.1 Classification of the Substance or Mixture

Hazard Classification: Flammable liquid 3
Skin irritation 2
Reproductive Toxicity 2
Aspiration toxicity 1

2.2 Label Elements



Pictogram:

Signal Word: Danger

Hazard Statement: Flammable liquid and vapor. Causes skin irritation. Suspected of damaging fertility of the un-born child. May be fatal if swallowed and enters airways.

Precautionary Statement: Keep away from heat, sparks, open flames or hot surfaces. Do not smoke. Keep containers tightly closed. Ground all containers and receiving equipment. Use explosion proof electrical, ventilation, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static

discharge. Wear protective gloves, clothing, eye glasses and face shield. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. If exposed, get medical attention. If on skin or hair, remove immediately all contaminated clothing and launder before re-use. Wash skin with soap and water. If skin irritation occurs, get medical attention. If swallowed, immediately call a poison control center or doctor. Do NOT induce vomiting. Store in a well ventilated place. Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other Hazards

Description of additional HNOC: None

3. Information on Ingredients:

3.1 Substance not applicable

3.2 Mixture

<u>Component</u>	<u>CAS Number</u>	<u>Concentration (wt%)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	64742-52-5	60-100%
Petroleum Distillates (Stoddard Solvent)	8052-41-3	10-30%
Tricresyl Phosphate	1330-78-5	0.1-1.0%
Ortho Dichlorobenzene	95-50-1	0.1-1.0%
Para Dichlorobenzene	106-46-7	<0.1%

4. First Aid Measures:

4.1 Description of First Aid Measures

Inhalation: Remove to fresh air and promote deep breathing. Get medical attention if effects persist or you feel un-well.

Skin: In case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and footwear. Launder clothing before re-use. Call a physician if irritation develops or persists.

Eyes: In case of eye contact, immediately flush eyes with plenty of water. Remove contact lenses if worn. If irritation persists, get medical attention

Ingestion: If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a poison control center or physician.

4.2 Most important symptoms and effects – acute and chronic

Inhalation: May cause respiratory tract irritation. Vapors may cause drowsiness or dizziness.

Skin: Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.

Eyes: May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.

Ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment

Symptoms may not appear immediately. Seek medical attention if effects develop or persist and you feel un-well.

5. Fire Fighting Measures:

5.1 Extinguishing media

Carbon dioxide, dry chemical, and alcohol foam

5.2 Special hazards arising from the substance or mixture

CO₂, CO, and hydrocarbons

5.3 Advice for Fire Fighters

Keep up wind of fire. Wear full firefighting turn out gear (full bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. See Section 8 for personal protection.

6. Accidental Release Measures:

6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate all source of ignition.

6.2 Methods and materials for containment and clean up

For containment: Contain and absorb spill with inert material. Place in suitable container for disposal. Do not flush to sewer or allow to enter waterways. See section 8 for PPE.

For clean up: Take up material and place in a suitable container. Vapors may be heavier than air and may travel along the ground to a distant source of ignition. Provide adequate ventilation.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from source of ignition. Do not smoke. Take precaution to eliminate static discharge. Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Do not eat or drink while handling. Wash hands with soap and water after handling. Use only non-sparking tools.

7.2 Conditions for safe storage including incompatibilities

Keep out of reach of children. Store in a well ventilated place. Do not store above 49°C (120°F).

7.3 Specific end uses

Shelf Life: Shelf life is considered to be 7 – 10 years when properly stored.

8. Exposure Control/Personal Protection:

8.1 Control parameters

<u>Exposure Limits</u>	<u>8 hr TWA:</u>	<u>(OSHA PEL)</u>	<u>(ACGIH TWA)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)		not applicable	not applicable
Petroleum Distillates (Stoddard Solvent)		500 ppm	100 ppm
Tricresyl Phosphate		not applicable	not applicable
Ortho Dichlorobenzene		50 ppm	25 ppm
Para Dichlorobenzene		75 ppm	10 ppm

8.2 Exposure controls

Use adequate ventilation to keep exposure below recommended limits. Ensure that eye wash station and safety shower are close to work station.

Hand Protection Equipment: Wear chemical resistant gloves to prevent skin contact.

Eye Protection Equipment: Wear safety glasses or splash goggles to prevent eye contact.

Skin and Body Protection: Wear suitable protective clothing.

Respiration/Ventilation Protection Requirements: Provide good ventilation.

Ingestion Protection Requirements: Do not eat, drink or smoke while handling. Wash hands with soap and water after handling. Launder all clothing and foot wear before re-use.

9. Physical And Chemical Properties:

9.1 Information of basic chemical and physical properties

Physical Form:	thin liquid
Color:	clear red
Odor:	typical oily
Odor Threshold:	not available
pH:	not applicable – oil based product
Melting Point/Freeze Point:	-51°C (-60°F)
Initial Boiling Point:	not available
Flash Point (Seta Closed Cup):	53°C (128°F)
Flammability Limits:	Explosive Limits: Upper: not available Lower: not available
Evaporation Rate:	not available
Flammability Solid/Gas:	not applicable
Vapor Pressure:	not available
Vapor Density:	not available
Specific Gravity:	0.876
Solubility in Water:	insoluble
Auto Ignition Temperature:	not available
Partition coefficient (n/octonol/water):	not available
Viscosity (Kinimatic @ 100°C):	2.0 – 3.0 cSt

9.2 Other information

% NVM by Weight:	75.0%
% VOC Content (California):	24.92%

10. Stability and Reactivity:

10.1 Reactivity

Does not react under normal conditions

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Does not react under normal conditions

10.4 Conditions to avoid

Heat and incompatible materials

10.5 Incompatible materials

Strong oxidizers such as bleach and peroxides

10.6 Hazardous decomposition products

CO₂, CO and hydrocarbons

11. Toxicological Information:

11.1 Information on Toxicological effects

Marvel Mystery Oil

LD50 – Oral Rat >2000 mg/Kg
LD50 – Dermal Rabbit >2000 mg/Kg
LC50 – Inhalation Rat >20 mg/L (4 hr)

Petroleum Distillates Hydrotreated Heavy Naphthenic (64742-52-5)

LD50 – Oral Rat >5000 mg/Kg
LD50 – Dermal Rabbit >5000 mg/Kg
LC50 – Inhalation Rat >5 mg/L (4 hr)

Tricresyl Phosphate (1330-78-5)

LD50 – Oral Rat 3000 mg/Kg

o-Dichlorobenzene (95-50-1)

LD50 – Oral Rat 500 mg/Kg
LD50 – Dermal Rabbit >10000 mg/Kg
LC50 – Inhalation Rat 8.15 mg/L (4 hr)

p-Dichlorobenzene (106-46-7)

LD50 – Oral Rat >2000 mg/Kg
LD50 – Dermal Rabbit >2000 mg/Kg

Skin corrosion/irritation	Causes skin irritation
Serious eye damage/irritation	Based on available data, classification data are not met
Respiratory or skin sensitization	Based on available data, classification data are not met
Germ cell mutagenicity	Based on available data, classification data are not met
Carcinogenicity	Based on available data, classification data are not met

o-Dichlorobenzene (95-50-1) IARC Group 3 – Not Classified

p-dichlorobenzene (106-46-7)	IARC Group 2B – Possible carcinogen to humans. NTP 1-Evidence of Carcinogenicity 3, Reasonably anticipated to be a human Carcinogen
Reproductive toxicity	Suspected of damaging fertility of un-born child
Specific target organs – single exposure	Based on available data, classification data are not met
Specific target organs – repeated exposure	Based on available data, classification data are not met
Aspiration hazard	May be fatal if swallowed and enters air ways.
Symptoms/injuries after inhalation	May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Symptoms/injuries after skin contact	Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.
Symptoms/injuries after eye contact	May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.
Symptoms/injuries after ingestion	May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

12. Ecological Information:

12.1 Toxicity

Not recommended for release into aquatic systems without treatment

12.2 Persistence and degradability

Not established

12.3 Bioaccumulative potential

Not established

12.4 Mobility in soil

Not established

12.5 Other adverse effects

None known

13. Disposal Considerations:

13.1 Waste treatment methods

RCRA Hazardous Waste:

Regulated as a hazardous waste (D-001 Ignitable).

Waste Disposal Method:

Dispose of in accordance with local, state and federal regulations

Waste Disposal Vessel:

Metal drums are recommended.

14. Transportation Information:

14.1 UN number

1268

14.2 UN Proper shipping name

Petroleum Distillate n.o.s.

14.3 Transport Hazard class

3

14.4 Packaging group

III

14.5 Marine Pollutant

No

14.6 Transportation in Bulk

Not applicable

14.7 Special precautions

Use limited quantities

15. Regulatory Information:

15.1 US Federal Regulations

TSCA Status: All ingredients are commercially available and listed by the manufacturer under TSCA.

15.2 Foreign Regulations

Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substance List (DSL). Consult Turtle Wax, Inc. regarding status of ingredients.

European Union: All materials contained in this product are listed on EINECS.

AICS: All materials are registered for AICS (Australia)

15.3 State Regulations

State Regulatory Information:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state.

California Prop 65:

<u>CAS Number</u>	<u>Concentration</u>	<u>State Code</u>
p-Dichlorobenzene (106-46-7)	<0.1%	Cancer

15.4 HMIS & NFPA Classifications

HMIS Classification:	Health	2
	Flammability	2
	Reactivity	0
NFPA Classification:	Health	2
	Flammability	2

Reactivity 0

15.5 Discontinued SKU's All discontinued SKU's used this same formula.

MM080, MM085, MM85R, MM086, MM088R, MM089

16. Other Information:

Reason For Issue	Address Update
Prepared By	James Heidel
Preparer's Title	Technical Director, R&D
SDS Administrator	Jean Mayszak - Technical Compliance Manager, R&D
Approval Date	January 26, 2017
Supersedes Date	March 10, 2015
Revision Number	#12

This information is, to the best of Turtle Wax, Inc.'s knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy oneself as to the suitability and completeness of such information for their own particular use.



MARVEL OIL CO., INC.
2250 W. Pinehurst Blvd., STE 150
Addison, IL 60101

SAFETY DATA SHEET

1. Product and Company Identification

1.1 Product Identifier

Product Name: Marvel Air Tool Oil
Product Code (SKU): MM85R1 (50100), MM080R (50093) - See Section 15 for discontinued SKU's

1.2 Relevant Identified Uses Of The Substance

Product Use: Engine Oil Additive – Fuel additive (EPA Registered)

1.3 Details of the Supplier of the SDS

Company Name: Marvel Oil Company, Inc.
Street Address: 2250 W. Pinehurst Blvd., Suite 150
City, State, Zip Code: Addison, IL 60101

1.4 Emergency Telephone Numbers

Phone Number: 1(630)455-3700
Fax Number: 1(630)455-3868
Transportation: 1(800)424-9300 (CHEMTREC)
Medical Assistance: Call your local Poison Control Center

2. Hazard Identification:

2.1 Classification of the Substance or Mixture

Hazard Classification: Flammable liquid 3
Skin irritation 2
Reproductive Toxicity 2
Aspiration toxicity 1

2.2 Label Elements



Pictogram:

Signal Word: Danger

Hazard Statement: Flammable liquid and vapor. Causes skin irritation. Suspected of damaging fertility of the un-born child. May be fatal if swallowed and enters airways.

Precautionary Statement: Keep away from heat, sparks, open flames or hot surfaces. Do not smoke. Keep containers tightly closed. Ground all containers and receiving equipment. Use explosion proof electrical, ventilation, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static

discharge. Wear protective gloves, clothing, eye glasses and face shield. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. If exposed, get medical attention. If on skin or hair, remove immediately all contaminated clothing and launder before re-use. Wash skin with soap and water. If skin irritation occurs, get medical attention. If swallowed, immediately call a poison control center or doctor. Do NOT induce vomiting. Store in a well ventilated place. Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other Hazards

Description of additional HNOC: None

3. Information on Ingredients:

3.1 Substance not applicable

3.2 Mixture

<u>Component</u>	<u>CAS Number</u>	<u>Concentration (wt%)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	64742-52-5	60-100%
Petroleum Distillates (Stoddard Solvent)	8052-41-3	10-30%
Tricresyl Phosphate	1330-78-5	0.1-1.0%
Ortho Dichlorobenzene	95-50-1	0.1-1.0%
Para Dichlorobenzene	106-46-7	<0.1%

4. First Aid Measures:

4.1 Description of First Aid Measures

Inhalation: Remove to fresh air and promote deep breathing. Get medical attention if effects persist or you feel un-well.

Skin: In case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and footwear. Launder clothing before re-use. Call a physician if irritation develops or persists.

Eyes: In case of eye contact, immediately flush eyes with plenty of water. Remove contact lenses if worn. If irritation persists, get medical attention

Ingestion: If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a poison control center or physician.

4.2 Most important symptoms and effects – acute and chronic

Inhalation: May cause respiratory tract irritation. Vapors may cause drowsiness or dizziness.

Skin: Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.

Eyes: May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.

Ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment

Symptoms may not appear immediately. Seek medical attention if effects develop or persist and you feel un-well.

5. Fire Fighting Measures:

5.1 Extinguishing media

Carbon dioxide, dry chemical, and alcohol foam

5.2 Special hazards arising from the substance or mixture

CO₂, CO, and hydrocarbons

5.3 Advice for Fire Fighters

Keep up wind of fire. Wear full firefighting turn out gear (full bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. See Section 8 for personal protection.

6. Accidental Release Measures:

6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate all source of ignition.

6.2 Methods and materials for containment and clean up

For containment: Contain and absorb spill with inert material. Place in suitable container for disposal. Do not flush to sewer or allow to enter waterways. See section 8 for PPE.

For clean up: Take up material and place in a suitable container. Vapors may be heavier than air and may travel along the ground to a distant source of ignition. Provide adequate ventilation.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from source of ignition. Do not smoke. Take precaution to eliminate static discharge. Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Do not eat or drink while handling. Wash hands with soap and water after handling. Use only non-sparking tools.

7.2 Conditions for safe storage including incompatibilities

Keep out of reach of children. Store in a well ventilated place. Do not store above 49°C (120°F).

7.3 Specific end uses

Shelf Life: Shelf life is considered to be 7 – 10 years when properly stored.

8. Exposure Control/Personal Protection:

8.1 Control parameters

<u>Exposure Limits</u>	<u>8 hr TWA:</u>	<u>(OSHA PEL)</u>	<u>(ACGIH TWA)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)		not applicable	not applicable
Petroleum Distillates (Stoddard Solvent)		500 ppm	100 ppm
Tricresyl Phosphate		not applicable	not applicable
Ortho Dichlorobenzene		50 ppm	25 ppm
Para Dichlorobenzene		75 ppm	10 ppm

8.2 Exposure controls

Use adequate ventilation to keep exposure below recommended limits. Ensure that eye wash station and safety shower are close to work station.

Hand Protection Equipment: Wear chemical resistant gloves to prevent skin contact.

Eye Protection Equipment: Wear safety glasses or splash goggles to prevent eye contact.

Skin and Body Protection: Wear suitable protective clothing.

Respiration/Ventilation Protection Requirements: Provide good ventilation.

Ingestion Protection Requirements: Do not eat, drink or smoke while handling. Wash hands with soap and water after handling. Launder all clothing and foot wear before re-use.

9. Physical And Chemical Properties:

9.1 Information of basic chemical and physical properties

Physical Form:	thin liquid
Color:	clear red
Odor:	typical oily
Odor Threshold:	not available
pH:	not applicable – oil based product
Melting Point/Freeze Point:	-51°C (-60°F)
Initial Boiling Point:	not available
Flash Point (Seta Closed Cup):	53°C (128°F)
Flammability Limits:	Explosive Limits: Upper: not available Lower: not available
Evaporation Rate:	not available
Flammability Solid/Gas:	not applicable
Vapor Pressure:	not available
Vapor Density:	not available
Specific Gravity:	0.876
Solubility in Water:	insoluble
Auto Ignition Temperature:	not available
Partition coefficient (n/octanol/water):	not available
Viscosity (Kinimatic @ 100°C):	2.0 – 3.0 cSt

9.2 Other information

% NVM by Weight:	75.0%
% VOC Content (California):	24.92%

10. Stability and Reactivity:

10.1 Reactivity

Does not react under normal conditions

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Does not react under normal conditions

10.4 Conditions to avoid

Heat and incompatible materials

10.5 Incompatible materials

Strong oxidizers such as bleach and peroxides

10.6 Hazardous decomposition products

CO₂, CO and hydrocarbons

11. Toxicological Information:

11.1 Information on Toxicological effects

Marvel Mystery Oil

LD50 – Oral Rat	>2000 mg/Kg
LD50 – Dermal Rabbit	>2000 mg/Kg
LC50 – Inhalation Rat	>20 mg/L (4 hr)

Petroleum Distillates Hydrotreated Heavy Naphthenic (64742-52-5)

LD50 – Oral Rat	>5000 mg/Kg
LD50 – Dermal Rabbit	>5000 mg/Kg
LC50 – Inhalation Rat	>5 mg/L (4 hr)

Tricresyl Phosphate (1330-78-5)

LD50 – Oral Rat	3000 mg/Kg
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o-Dichlorobenzene (95-50-1)

LD50 – Oral Rat	500 mg/Kg
LD50 – Dermal Rabbit	>10000 mg/Kg
LC50 – Inhalation Rat	8.15 mg/L (4 hr)

p-Dichlorobenzene (106-46-7)

LD50 – Oral Rat	>2000 mg/Kg
LD50 – Dermal Rabbit	>2000 mg/Kg

Skin corrosion/irritation

Causes skin irritation

Serious eye damage/irritation

Based on available data, classification data are not met

Respiratory or skin sensitization

Based on available data, classification data are not met

Germ cell mutagenicity

Based on available data, classification data are not met

Carcinogenicity

Based on available data, classification data are not met

o-Dichlorobenzene (95-50-1)

IARC Group 3 – Not Classified

p-dichlorobenzene (106-46-7)	IARC Group 2B – Possible carcinogen to humans. NTP 1-Evidence of Carcinogenicity 3, Reasonably anticipated to be a human Carcinogen
Reproductive toxicity	Suspected of damaging fertility of un-born child
Specific target organs – single exposure	Based on available data, classification data are not met
Specific target organs – repeated exposure	Based on available data, classification data are not met
Aspiration hazard	May be fatal if swallowed and enters air ways.
Symptoms/injuries after inhalation	May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Symptoms/injuries after skin contact	Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.
Symptoms/injuries after eye contact	May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.
Symptoms/injuries after ingestion	May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

12. Ecological Information:

12.1 Toxicity

Not recommended for release into aquatic systems without treatment

12.2 Persistence and degradability

Not established

12.3 Bioaccumulative potential

Not established

12.4 Mobility in soil

Not established

12.5 Other adverse effects

None known

13. Disposal Considerations:

13.1 Waste treatment methods

RCRA Hazardous Waste:

Waste Disposal Method:

Waste Disposal Vessel:

Regulated as a hazardous waste (D-001 Ignitable).
Dispose of in accordance with local, state and federal regulations
Metal drums are recommended.

14. Transportation Information:

14.1 UN number

1268

14.2 UN Proper shipping name

Petroleum Distillate n.o.s.

14.3 Transport Hazard class

3

14.4 Packaging group

III

14.5 Marine Pollutant

No

14.6 Transportation in Bulk

Not applicable

14.7 Special precautions

Use limited quantities

15. Regulatory Information:**15.1 US Federal Regulations**

TSCA Status: All ingredients are commercially available and listed by the manufacturer under TSCA.

15.2 Foreign Regulations

Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substance List (DSL). Consult Turtle Wax, Inc. regarding status of ingredients.

European Union: All materials contained in this product are listed on EINECS.

AICS: All materials are registered for AICS (Australia)

15.3 State Regulations**State Regulatory Information:**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state.

California Prop 65:

<u>CAS Number</u>	<u>Concentration</u>	<u>State Code</u>
p-Dichlorobenzene (106-46-7)	<0.1%	Cancer

15.4 HMIS & NFPA Classifications

HMIS Classification:	Health	2
	Flammability	2
	Reactivity	0
NFPA Classification:	Health	2
	Flammability	2

Reactivity 0

15.5 Discontinued SKU's All discontinued SKU's used this same formula.
MM080, MM085, MM85R, MM086, MM088R, MM089

16. Other Information:

Reason For Issue	Address Update
Prepared By	James Heidel
Preparer's Title	Technical Director, R&D
SDS Administrator	Jean Mayszak - Technical Compliance Manager, R&D
Approval Date	January 26, 2017
Supersedes Date	March 10, 2015
Revision Number	#12

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MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY #5 PASTE FLUX
Product No.: 30011, 30012, 30013, 30014, 30041, 53017, 53200
Product Use: Flux for soldering.
Formula: See Section 2
Synonyms: Flux for Soldering Copper Pipe
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100 or (800) 321-9532
Emergency Phone Numbers: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Technical Department
Preparation Date: May 1, 2009

SECTION 2

COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS:</u>	<u>% wt/wt:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>
Petrolatum	60 - 100%	8009-03-8	5 mg/m3 (oil mist)	5 mg/m3 (oil mist)
Zinc Chloride	10 - 30%	7646-85-7	1 mg/m3(fume) 2 mg/m3 STEL	1 mg/m3(fume)
Ammonium Chloride	1 - 5%	12125-02-9	10 mg/m3 (fume) 20 mg/m3 STEL	None Established

SECTION 3

HAZARDS IDENTIFICATION

Emergency Overview:
Yellow paste with a slight odor. May cause burns to the eye and skin. Inhalation of fumes may cause respiratory irritation, metal fume fever, chills, nausea and vomiting. Swallowing may cause burns to the mouth or throat, vomiting, diarrhea and kidney or liver disorders. May be harmful if swallowed. Symptoms may be delayed.

OSHA Hazard Classification: Corrosive, target organ effects

SECTION 4

FIRST AID MEASURES

CALL 1-877-740-5015 or 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing. Wash thoroughly with soap and water. Call a physician or poison control center if irritation persists.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.
Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.
Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 540 Degrees F (282 Degrees C)
Flammability: LEL = Not determined, UEL = Not determined
Extinguishing Small Fires: Use dry chemical, CO2, water, or foam extinguisher
Media: Large Fires: Evacuate area and call Fire Department immediately
Special Fire Firefighters should wear positive pressure self-contained
Fighting breathing apparatus and full protective clothing for fires in
Procedure: areas where chemicals are used or stored
Unusual Fire and None known.
Explosion
Hazards:
Hazardous Hydrocarbons, hydrogen chloride, zinc fumes, ammonia, smoke,
Decomposition carbon monoxide, carbon dioxide and nitrogen oxides.
Products:

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Ventilate area. Stop leak if it can be done without risk. Personnel
Procedures: cleaning up the spill should wear appropriate personal protective
equipment. Take up spill with sand, earth or other absorbent material
and place into a clean, dry leak-proof container.

SECTION 7 HANDLING AND STORAGE

Handling: Do not get in eyes. Do not get on skin or clothing. Do not take
internally. Avoid breathing vapors or fumes. Use only with adequate
ventilation. Wash thoroughly after handling. Keep container closed when
not in use. Handle with care. Keep out of reach of children.
Storage: Store in original, labeled container.
Other: Containers, even empty will retain residue and may be harmful.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Good general ventilation (equivalent to outdoors) should be adequate
for normal use. For operations where the TLV may be exceeded,
mechanical ventilation such as local exhaust may be needed to maintain
exposure levels below applicable limits.
Respiratory For operations where the TLV may be exceeded, a NIOSH approved
Protection: particulate respirator or supplied air respirator is recommended.
Equipment selection depends on contaminant type and concentration,
select in accordance with 29 CFR 1910.134 and good industrial hygiene
practice. For firefighting, use self-contained breathing apparatus.
Skin Wear rubber gloves.
Protection:
Eye Safety glasses with sideshields or safety goggles.
Protection:
Other: Eye wash and safety shower should be available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 638 Degrees F (337 Degrees C)
Melting Point: Not determined
Vapor Pressure: Not determined
Vapor Density: (Air = 1) Greater than 1
Volatile Components: 7-10%
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 1.1
Evaporation Rate: Not applicable
Appearance: Yellow Paste
Odor: Very little odor
Will Dissolve In: Methylene Chloride
Material Is: Paste

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: None.
Hazardous: Hydrocarbons, hydrogen chloride, zinc fumes, ammonia, smoke,
Decomposition: smoke, carbon monoxide, carbon dioxide and nitrogen oxides.
Products:
Incompatibility/ Strong oxidizing agents, potassium, cyanides and sulfides.
Materials To Avoid:
Hazardous: Will not occur.
Polymerization:

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation: Fumes from heated product may be corrosive to mucous membranes and the respiratory system. Fumes may cause burning sensation, coughing, wheezing, shortness of breath, cyanosis, fever, chills, muscular pain, anemia, metallic taste in the mouth, headache, nausea, vomiting, sweating, diarrhea and pulmonary edema. Fumes may cause stannosis, a mild benign pneumoconiosis. Repeated inhalation of fumes may cause occupational asthma. Symptoms may be delayed.

Skin: Contact may cause irritation, ulcerations, burns or dermatitis. Symptoms may be delayed.

Eye: Vapors or fumes may cause redness, pain, blurred vision and corneal damage. Direct contact may cause burns and eye damage with possible blindness. Symptoms may be delayed.

Ingestion: May cause irritation or burns to the mouth and throat, nausea, vomiting or diarrhea. Death may occur from strictures of the esophagus and pylorus. Symptoms may be delayed.

Toxicity Data: Petrolatum: No data available
Zinc Chloride: Oral rat LD50: 350 mg/kg
Ammonium Chloride: Oral rat LD50: 1,650 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA.

Mutagenicity: None of the components have been found to be mutagenic.

Reproductive Toxicity: None of the components are known to cause adverse reproductive effects.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

SECTION 12 ECOLOGICAL INFORMATION

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with federal, state, and local regulations. It is the responsibility of the end-user to determine at the time of disposal of the product.

RCRA Hazardous Waste Number: None
EPA Hazardous Waste ID Number: None
EPA Hazard Waste Class: None

SECTION 14 TRANSPORT INFORMATION

DOT

Proper Shipping Name: Not regulated
Hazard Class/Packing Group: None
UN/NA Number: None
Hazard Labels: None

IMDG

Proper Shipping Name: Not regulated
Hazard Class/Packing Group: None
UN Number: None
Label: None
2004 North American Emergency Response Guidebook Number: None

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312: Acute Health, Chronic Health

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>% wt</u>
Zinc Chloride	7646-85-7	10-30%

CERCLA 103 Reportable Quantity:

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Zinc Chloride (30% max) of 1,000 lbs, is 3,300 lbs.

<u>Chemical</u>	<u>CAS #</u>	<u>RQ, lbs.</u>
Zinc Chloride	7646-85-7	1,000
Ammonium Chloride	12125-02-6	5,000

Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product does not contain chemicals regulated under California Proposition 65.

TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

Canadian WHMIS Classification: Class E; Class D, Division 2, Subdivision B
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16 OTHER INFORMATION

NFPA and HMIS:

NFPA Hazard Signal: Health: 3 Flammability: 1 Reactivity: 0 Special: None

HMIS Hazard Signal: Health: 3* Flammability: 1 Reactivity: 0 PPE: B

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.



OXYGEN

Safety Data Sheet

1. IDENTIFICATION

Product identifier

Product Name OXYGEN

Other means of identification

Safety data sheet number IOC-P097

UN/ID no. UN1072

Synonyms LASER Oxygen; Oxygen, Compressed

Recommended use of the chemical and restrictions on use

Recommended Use Industrial and professional use.

Uses advised against Consumer use

Details of the supplier of the safety data sheet

Indiana Oxygen Company

6099 W. Corporate Way

Indianapolis, IN 46278

Phone: 317-290-0003

www.indianaoxygen.com

* May include subsidiaries or affiliate companies/divisions.

For additional product information contact your local customer service.

Emergency telephone number

Company Phone Number 1-800-535-5035 (Infotrak)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Oxidizing gases	Category 1
Gases under pressure	Compressed gas

Label elements



Signal word

Danger

Hazard Statements

May cause or intensify fire; oxidizer

Contains gas under pressure; may explode if heated

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood

Keep and store away from clothing and other combustible materials

Keep valves and fittings free from oil and grease

Use and store only outdoors or in a well ventilated place

Use backflow preventive device in piping

Use only equipment of compatible materials of construction and rated for cylinder pressure

Use only with equipment cleaned for oxygen service

Open valve slowly

Close valve after each use and when empty

Precautionary Statements - Response

In case of fire: Stop leak if safe to do so

Precautionary Statements - Storage

Protect from sunlight when ambient temperature exceeds 52°C/125°F

Hazards not otherwise classified (HNOC)

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Volume %	Chemical Formula
Oxygen	7782-44-7	100	O ₂

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move victim to fresh air. Seek immediate medical attention/advice.
Skin contact	None under normal use. Get medical attention if symptoms occur.
Eye contact	None under normal use. Get medical attention if symptoms occur.
Ingestion	Not an expected route of exposure.

Most important symptoms and effects, both acute and delayed

Symptoms	Oxygen is not acutely toxic under normal pressure. Oxygen is more toxic when inhaled at elevated pressures. Depending upon pressure and duration of exposure, pure oxygen at elevated pressures may cause cramps, dizziness, difficulty breathing, convulsions, edema and death.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific extinguishing methods

Continue to cool fire exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.

Specific hazards arising from the chemical

May cause or intensify fire; oxidizer. Will support and accelerate combustion of combustible materials (wood, paper, oil, debris, etc). Cylinders may rupture under extreme heat.

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. Ensure adequate ventilation, especially in confined areas. Monitor oxygen level. Eliminate all ignition sources if safe to do so.
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Environmental precautions

Environmental precautions	Prevent spreading of vapors through sewers, ventilation systems and confined areas.
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Methods and material for containment and cleaning up

Methods for containment	Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Indiana Oxygen location.
Methods for cleaning up	Return cylinder to Indiana Oxygen Company or an authorized distributor.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Keep valves and fittings free from oil and grease. Use only equipment of compatible materials and construction. Open valve slowly. NO SMOKING" signs should be posted in storage and use areas. Separate flammable gas cylinders from oxygen and other oxidizers by a minimum distance of 20 ft. or by a 5 ft. high barrier with a minimum fire resistance rating of a half an hour. Dry product is non-corrosive and may be used with all materials of construction. Moisture causes metal oxides which are formed with air to be hydrated so that they include volume and lose their protective role (rust formation). Concentrations of SO₂, Cl₂, salt, etc. in the moisture enhances the rusting of metals in air. Carbon steels and low alloy steels are acceptable for use at lower pressures. For high pressure applications stainless steels are acceptable as are copper and its alloys, nickel and its alloys, brass bronze, silicon alloys, Monel®, Inconel®, and beryllium. Lead and silver or lead tin alloys are good gasket materials. Teflon®, Teflon® composites, or Kel-F® are preferred non-metallic gasket materials. Oxygen should not be used as a substitute for compressed air in pneumatic equipment since they generally contain flammable lubricants. Equipment able to use oxygen must be "cleaned for oxygen service". Check with the equipment supplier to verify oxygen compatibility for the service conditions.

Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Never attempt to lift a cylinder by its valve protection cap. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Use only with adequate ventilation. Use only with equipment rated for cylinder pressure. Use backflow preventive device in piping. Close valve after each use and when empty. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. Ensure the complete gas system has been checked for leaks before use.

Only experienced and properly instructed persons should handle gases under pressure. Always store and handle compressed gas cylinders in accordance with Compressed Gas Association, pamphlet CGA-P1, Safe Handling of Compressed Gases in Containers.

For additional recommendations, consult Compressed Gas Association's Pamphlets SB-7, G-4.3, G-4.1, G-4.4, P-2.5, G-4.9, P-14, and SB-2.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Stored containers should be periodically checked for general condition and leakage. Do not store near combustible materials

Incompatible materials

Reducing agents. Combustible material. Organic material.

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.

Appropriate engineering controls

Engineering Controls Ventilation systems. Use local exhaust in combination with general ventilation as necessary to keep oxygen concentrations below 23.5%. Consider installation of leak detection systems in areas of use and storage. Systems under pressure should be regularly checked for leakages.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Work gloves and safety shoes are recommended when handling cylinders. Gloves must be clean and free from grease or oil.

Respiratory protection No special protective equipment required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Compressed gas
Appearance	Colorless.
Odor	Odorless.
Odor threshold	No information available
pH	No data available
Melting point	-218.8 °C / -361.8 °F
Evaporation rate	Not applicable
Fire Hazard	Yes
Lower flammability limit:	Not applicable
Upper flammability limit:	Not applicable
Flash point	No information available
Autoignition temperature	No data available
Decomposition temperature	No data available
Oxidizing properties	Oxidizer
Water solubility	Slightly soluble
Partition coefficient	0.65
Kinematic viscosity	Not applicable

Chemical Name	Molecular weight	Boiling point	Vapor Pressure	Vapor density (air =1)	Gas Density Kg/m ³ @20°C	Critical Temperature
Oxygen	31.99	-182.9 °C	Above critical temperature	1.11	1.331	-118.6 °C

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Reducing agents. Combustible material. Organic material.

Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATIONInformation on likely routes of exposure

Inhalation	Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. Poisoning began in dogs 36 hours after inhalation of pure oxygen at atmospheric pressure. Distress was seen within 48 hours and death within 60 hours.
Skin contact	No data available.
Eye contact	The incompletely developed retinal circulation is more susceptible to toxic levels of oxygen. In premature infants, arterial oxygen tension above 150 mm Hg may cause retrolental fibroplasia. Permanent blindness may occur several months later. One case of severe retinal damage in an adult was reported. An individual suffering from myasthenia gravis developed irreversible retinal atrophy after breathing 80% oxygen for 150 days.
Ingestion	Not an expected route of exposure.

Information on toxicological effects

Symptoms	Oxygen is not acutely toxic under normal pressure. Oxygen is more toxic when inhaled at elevated pressures. Depending upon pressure and duration of exposure, pure oxygen at elevated pressures may cause cramps, dizziness, difficulty breathing, convulsions, edema and death.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Not classified.
Sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens listed by OSHA, IARC or NTP.
Reproductive toxicity	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Chronic toxicity	Prolonged inhalation of high oxygen concentrations (>75%) may affect coordination, attention, and cause tiredness of respiratory irritation.
Aspiration hazard	Not applicable.

Numerical measures of toxicity

Product Information	
Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	No information available

12. ECOLOGICAL INFORMATIONEcotoxicity

Will not bioconcentrate.

Persistence and degradability

Not applicable.

Bioaccumulation

Will not bioconcentrate.

13. DISPOSAL CONSIDERATIONSWaste treatment methods

Disposal of wastes

Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Indiana Oxygen for proper disposal.

14. TRANSPORT INFORMATIONDOT

UN/ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary class	5.1
Description	UN1072,Oxygen, compressed,2.2,(5.1)
Emergency Response Guide Number	122

TDG

UN/ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary class	(5.1)
Description	UN1072,OXYGEN, COMPRESSED,2.2(5.1)

MEX

UN/ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary class	5.1

IATA

UN/ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary hazard class	5.1
Description	UN1072,Oxygen, compressed,2.2(5.1)

IMDG

UN/ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary hazard class	5.1
EmS-No.	F-C, S-W
Description	UN1072, Oxygen, compressed,2.2(5.1)

ADR

UN/ID no.	UN1072
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Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Classification code	10
Description	UN1072 Oxygen, compressed,2.2,
Labels	5.1

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies
EINECS/ELINCS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified 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	Yes
Sudden release of pressure hazard	Yes
Reactive Hazard	No

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.

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.

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)

Risk and Process Safety Management Programs

This material, as supplied, does not contain any regulated substances with specified thresholds under 40 CFR Part 68. This product does not contain any substances regulated as Highly Hazardous Chemicals pursuant to the 29 CFR Part 1910.110.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
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Oxygen 7782-44-7	X	X	X
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International Regulations

16. OTHER INFORMATION

NFPA Health hazards 0 Flammability 0 Instability 0 Physical and Chemical Properties OX

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2009, CGA Recommended Hazard Ratings for Compressed Gases, 3rd Edition.

Issue Date 24-Feb-2015
 Revision Date 24-Jul-2015
 Revision Note Initial Release.

General Disclaimer

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between Indiana Oxygen Company (or any of their affiliates and subsidiaries) and the purchaser.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End of Safety Data Sheet

SAFETY DATA SHEET

1. Identification

Product identifier Propane

Other means of identification
SDS number WC002

Recommended use Soldering and brazing.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 300 E. Breed St.
 Chilton, WI 53014
 United States

E-mail SDSRequest@worthingtonindustries.com

Telephone 1-800-359-9678

Emergency telephone CHEMTREC 1-800-424-9300 (USA)
 1-703-527-3887 International
 (CCN 628056)

2. Hazard(s) identification

Physical hazards Flammable gases Category 1
 Gases under pressure Liquefied gas

Health hazards Not classified.

OSHA defined hazards Simple asphyxiant

Label elements



Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Use only with adequate ventilation.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Contact with liquefied gas may cause frostbite.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	87.5 - 100
Propylene	115-07-1	0 - 10
Ethane	74-84-0	0 - 7

Chemical name	CAS number	%
Butane	106-97-8	0 - 2.5

Additives			
Chemical name	Common name and synonyms	CAS number	%
Ethyl mercaptan		75-08-1	< 0.005

Composition comments Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
Skin contact	Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.
Eye contact	Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themselves.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory disorders. Provide general supportive measures and treat symptomatically.
General information	First aid personnel must be aware of own risk during rescue. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical powder. Carbon dioxide (CO ₂). Water fog. Foam.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Extremely flammable gas. May form explosive mixtures with air. Gas may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	Extremely flammable gas. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. In the event of a leak evacuate all personnel until ventilation can restore oxygen concentrations to safe levels. Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Wear appropriate personal protective equipment (See Section 8).
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Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.

Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. All equipment used when handling the product must be grounded. Do not breathe gas. Avoid prolonged exposure. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Do not store, incinerate, or heat this material above 120 degrees Fahrenheit. Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Protect cylinders from damage. Stored containers should be periodically checked for general condition and leakage. Store in original tightly closed container. 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
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Propylene (CAS 115-07-1)	TWA	500 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Follow standard monitoring procedures.

Appropriate engineering controls

Provide adequate ventilation and minimize the risk of inhalation of gas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear approved safety glasses or goggles. Face shield is recommended.

Skin protection

Hand protection

Wear cold insulating gloves.

Skin protection

Other

Wear protective clothing appropriate for the risk of exposure.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134).

WARNING! Air-purifying respirators do not protect workers in oxygen deficient atmospheres.

Thermal hazards	Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance

Physical state	Gas.
Form	Compressed liquefied gas.
Color	Colorless.
Odor	Rotten egg.
Odor threshold	Not determined.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not determined.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not determined.
Relative density	0.504 (liquid) 1.5 (vapor) (Air=1) (59 °F (15 °C))
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not determined.
Viscosity	Not applicable.
Other information	
Density	Not determined.
Explosive properties	Not explosive.
Kinematic viscosity	Not determined.
Molecular weight	45 g/mol
Oxidizing properties	Not oxidizing.
Particle size	Not applicable.
Percent volatile	100 %

10. Stability and reactivity

Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur. May form explosive mixture with air. This product may react with oxidizing agents.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Halogens. Nitrates.

Hazardous decomposition products Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.

Skin contact Contact with liquefied gas may cause frostbite.

Eye contact Contact with liquefied gas may cause frostbite.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Symptoms related to the physical, chemical and toxicological characteristics Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themselves.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 65000 ppm, 4 Hours
Skin corrosion/irritation	Not classified.	
Serious eye damage/eye irritation	Not classified.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Propylene (CAS 115-07-1)	3 Not classifiable as to carcinogenicity to humans.	
NTP Report on Carcinogens		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not relevant, due to the form of the product.	
Chronic effects	Exposure over a long period of time may cause central nervous system effects.	

12. Ecological information

Ecotoxicity	The product is not expected to be hazardous to the environment.
Persistence and degradability	Not relevant, due to the form of the product.
Bioaccumulative potential	Not relevant, due to the form of the product.
Partition coefficient n-octanol / water (log Kow)	
Propane (CAS 74-98-6)	2.36
Propylene (CAS 115-07-1)	1.77
Mobility in soil	Not relevant, due to the form of the product.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1075
UN proper shipping name	Petroleum gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	-
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315

IATA

UN number	UN1075
UN proper shipping name	Petroleum gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	-
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1075
UN proper shipping name	PETROLEUM GASES, LIQUEFIED
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	-
Environmental hazards	
Marine pollutant	No

EmS

E-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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)

Butane (CAS 106-97-8)	Listed.
Ethyl mercaptan (CAS 75-08-1)	Listed.
Propane (CAS 74-98-6)	Listed.
Propylene (CAS 115-07-1)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Flammable (gases, aerosols, liquids, or solids)
Gas under pressure
Simple asphyxiant
Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	0 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

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

Butane (CAS 106-97-8)
Ethyl mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Butane (CAS 106-97-8)
Ethyl mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
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US. Rhode Island RTK

Butane (CAS 106-97-8)
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California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Butane (CAS 106-97-8)
Propylene (CAS 115-07-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 05-May-2014
Revision date 21-March-2021
Version # 03
HMIS® ratings Health: 2
Flammability: 4
Physical hazard: 3

NFPA ratings



Disclaimer

All information in this Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.

SAFETY DATA SHEET

1. Identification

Product identifier Propane

Other means of identification
SDS number WC002

Recommended use Soldering and brazing.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 300 E. Breed St.
 Chilton, WI 53014
 United States

E-mail SDSRequest@worthingtonindustries.com

Telephone 1-800-359-9678

Emergency telephone CHEMTREC 1-800-424-9300 (USA)
 1-703-527-3887 International
 (CCN 628056)

2. Hazard(s) identification

Physical hazards Flammable gases Category 1
 Gases under pressure Liquefied gas

Health hazards Not classified.

OSHA defined hazards Simple asphyxiant

Label elements



Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Use only with adequate ventilation.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Contact with liquefied gas may cause frostbite.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	87.5 - 100
Propylene	115-07-1	0 - 10
Ethane	74-84-0	0 - 7

Chemical name	CAS number	%
Butane	106-97-8	0 - 2.5

Additives

Chemical name	Common name and synonyms	CAS number	%
Ethyl mercaptan		75-08-1	< 0.005

Composition comments Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
Skin contact	Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.
Eye contact	Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themselves.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory disorders. Provide general supportive measures and treat symptomatically.
General information	First aid personnel must be aware of own risk during rescue. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical powder. Carbon dioxide (CO ₂). Water fog. Foam.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Extremely flammable gas. May form explosive mixtures with air. Gas may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	Extremely flammable gas. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. In the event of a leak evacuate all personnel until ventilation can restore oxygen concentrations to safe levels. Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Wear appropriate personal protective equipment (See Section 8).
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Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.

Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. All equipment used when handling the product must be grounded. Do not breathe gas. Avoid prolonged exposure. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Do not store, incinerate, or heat this material above 120 degrees Fahrenheit. Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Protect cylinders from damage. Stored containers should be periodically checked for general condition and leakage. Store in original tightly closed container. 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
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Propylene (CAS 115-07-1)	TWA	500 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Follow standard monitoring procedures.

Appropriate engineering controls

Provide adequate ventilation and minimize the risk of inhalation of gas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear approved safety glasses or goggles. Face shield is recommended.

Skin protection

Hand protection

Wear cold insulating gloves.

Skin protection

Other

Wear protective clothing appropriate for the risk of exposure.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134).

WARNING! Air-purifying respirators do not protect workers in oxygen deficient atmospheres.

Thermal hazards	Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance

Physical state	Gas.
Form	Compressed liquefied gas.
Color	Colorless.
Odor	Rotten egg.
Odor threshold	Not determined.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not determined.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not determined.
Relative density	0.504 (liquid) 1.5 (vapor) (Air=1) (59 °F (15 °C))
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not determined.
Viscosity	Not applicable.
Other information	
Density	Not determined.
Explosive properties	Not explosive.
Kinematic viscosity	Not determined.
Molecular weight	45 g/mol
Oxidizing properties	Not oxidizing.
Particle size	Not applicable.
Percent volatile	100 %

10. Stability and reactivity

Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur. May form explosive mixture with air. This product may react with oxidizing agents.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Halogens. Nitrates.

Hazardous decomposition products Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.

Skin contact Contact with liquefied gas may cause frostbite.

Eye contact Contact with liquefied gas may cause frostbite.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Symptoms related to the physical, chemical and toxicological characteristics Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themselves.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 65000 ppm, 4 Hours
Skin corrosion/irritation	Not classified.	
Serious eye damage/eye irritation	Not classified.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Propylene (CAS 115-07-1)	3 Not classifiable as to carcinogenicity to humans.	
NTP Report on Carcinogens		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not relevant, due to the form of the product.	
Chronic effects	Exposure over a long period of time may cause central nervous system effects.	

12. Ecological information

Ecotoxicity	The product is not expected to be hazardous to the environment.
Persistence and degradability	Not relevant, due to the form of the product.
Bioaccumulative potential	Not relevant, due to the form of the product.
Partition coefficient n-octanol / water (log Kow)	
Propane (CAS 74-98-6)	2.36
Propylene (CAS 115-07-1)	1.77
Mobility in soil	Not relevant, due to the form of the product.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1075
UN proper shipping name	Petroleum gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	-
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315

IATA

UN number	UN1075
UN proper shipping name	Petroleum gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	-
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1075
UN proper shipping name	PETROLEUM GASES, LIQUEFIED
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	-
Environmental hazards	
Marine pollutant	No

EmS

E-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butane (CAS 106-97-8)	Listed.
Ethyl mercaptan (CAS 75-08-1)	Listed.
Propane (CAS 74-98-6)	Listed.
Propylene (CAS 115-07-1)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Flammable (gases, aerosols, liquids, or solids)
Gas under pressure
Simple asphyxiant
Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	0 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

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

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Propylene (CAS 115-07-1)

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Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 05-May-2014
Revision date 21-March-2021
Version # 03
HMIS® ratings Health: 2
Flammability: 4
Physical hazard: 3

NFPA ratings



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PROPANE

Safety Data Sheet

1. IDENTIFICATION

Product identifier

Product Name PROPANE

Other means of identification

Safety data sheet number IOC-P105 UN1978
UN/ID no. Dimethylmethane
Synonyms

Recommended use of the chemical and restrictions on use

Recommended Use Industrial and professional use.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Indiana Oxygen Company
6099 W. Corporate Way
Indianapolis, IN 46278
Phone: 317-290-0003
www.indianaoxygen.com

* May include subsidiaries or affiliate companies/divisions.

For additional product information contact your local customer service.

Emergency telephone number

Company Phone Number 1-800-535-5053 (Infotrak)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Flammable gases	Category 1
Gases under pressure	Liquefied gas
Simple asphyxiants	Yes

Label elements

Signal word

Danger

Hazard Statements

Extremely flammable gas
 Contains gas under pressure; may explode if heated
 May displace oxygen and cause rapid suffocation
 May form explosive mixtures with air
 May cause frostbite

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Use and store only outdoors or in a well ventilated place
 Use backflow preventive device in piping
 Do not open valve until connected to equipment prepared for use
 Close valve after each use and when empty
 Never put cylinders into unventilated areas of passenger vehicles

Precautionary Statements - Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical attention/advice.
 IF ON SKIN: Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.
 Leaking gas fire: do not extinguish, unless leak can be stopped safely
 Eliminate all ignition sources if safe to do so

Precautionary Statements - Storage

Protect from sunlight when ambient temperature exceeds 52°C/125°F

Hazards not otherwise classified (HNOC)

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Volume %	Chemical Formula
Propane	74-98-6	100	C ₃ H ₈

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Skin contact	For dermal contact or suspected frostbite, remove contaminated clothing and flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if contact with the product has resulted in blistering of the dermal surface or in deep tissue freezing.
Eye contact	If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.
Ingestion	Not an expected route of exposure.
Self-protection of the first aider	RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Remove all sources of ignition.

Most important symptoms and effects, both acute and delayed

Symptoms	High concentrations may cause asphyxia from lack of oxygen or act as a narcotic causing central nervous system depression. May cause nausea, dizziness, headaches, shortness of breath, lethargy, narcosis, unconsciousness and possibly cardiac arrhythmias. Contact with liquid may cause cold burns/frostbite.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	A patient adversely affected by exposure to this product should not be given adrenaline (epinephrine) or similar heart stimulant since these would increase the risk of cardiac arrhythmias.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical or CO₂. Water spray (fog). DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Specific extinguishing methods

If possible, stop the flow of gas. Do not extinguish the fire until supply is shut off as otherwise an explosive-ignition may occur. If the fire is extinguished and the flow of gas continues, use increased ventilation to prevent build-up of explosive atmosphere. Ventilation fans must be explosion proof. Use non-sparking tools to close container valves.

Use water spray to cool surrounding containers. Be cautious of a Boiling Liquid Evaporating Vapor Explosion, BLEVE, if flame is impinging on surrounding containers. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Damaged cylinders should be handled only by specialists.

Specific hazards arising from the chemical

Extremely flammable gas. May form explosive mixtures with air. Will be easily ignited by heat, sparks or flames. Vapors may travel to source of ignition and flash back. Vapors from liquefied gas are initially heavier than air and spread along ground. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Cylinders may rupture under extreme heat.

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO₂).

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. As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Consider the risk of potentially explosive atmospheres. Monitor oxygen level. All equipment used when handling the product must be grounded. Use non-sparking tools and equipment. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Other Information Gas/vapor is heavier than air. Prevent from entering sewers, basements and workpits, or any place where accumulation may be dangerous.

Environmental precautions

Environmental precautions Prevent spreading of vapors through sewers, ventilation systems and confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Indiana Oxygen location.

Methods for cleaning up Do not direct water at spill or source of leak. Return cylinder to Indiana Oxygen Company or an authorized distributor.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof. Separate flammable gas cylinders from oxygen and other oxidizers by a minimum distance of 20 ft. or by a 5 ft. high barrier with a minimum fire resistance rating of a half an hour. NO SMOKING" signs should be posted in storage and use areas.

Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Never attempt to lift a cylinder by its valve protection cap. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Use only with adequate ventilation. Use backflow preventive device in piping. Use only with equipment rated for cylinder pressure. Close valve after each use and when empty. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Ensure the complete gas system has been checked for leaks before use.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.

Only experienced and properly instructed persons should handle gases under pressure. Always store and handle compressed gas cylinders in accordance with Compressed Gas Association, pamphlet CGA-P1, Safe Handling of Compressed Gases in Containers.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Stored containers should be periodically checked for general condition and leakage. Outside or detached storage is preferred.
Incompatible materials	Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m ³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. 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).
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Appropriate engineering controls

Engineering Controls	Local exhaust ventilation to prevent accumulation of high concentrations and maintain air-oxygen levels at or above 19.5%. Explosion proof ventilation systems. Oxygen detectors should be used when asphyxiating gases may be released. Consider installation of leak detection systems in areas of use and storage. Systems under pressure should be regularly checked for leakages. Showers. Eyewash stations.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear: Goggles. Face-shield.
Skin and body protection	Work gloves and safety shoes are recommended when handling cylinders. Wear cold insulating gloves when handling liquid. Wear fire/flame resistant/retardant clothing. Take precautionary measures against static discharge.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin, or on clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Compressed gas
Appearance	Colorless.
Odor	Odorless.
Odor threshold	No information available
pH	No data available
Melting point	No data available

Evaporation rate	Not applicable
Fire Hazard	Yes
Lower flammability limit:	2.2%
Upper flammability limit:	9.5%
Flash point	-104 °C / -156 °F
Autoignition temperature	450 °C / 842 °F
Decomposition temperature	No data available
Water solubility	Negligible
Partition coefficient	2.3
Kinematic viscosity	Not applicable

Chemical Name	Molecular weight	Boiling point	Vapor Pressure	Vapor density (air =1)	Gas Density Kg/m ³ @20°C	Critical Temperature
Propane	44.09	-42.04 °C	8.39 bar @ 20 °C	1.55	1.858	96.67 °C

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	Yes.

Possibility of Hazardous Reactions

May form explosive mixtures with air.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	High concentrations of aliphatic hydrocarbon gases may cause CNS depression. Recent information suggest that C1-C4 aliphatic (alkane) hydrocarbon gases can cause potentially fatal cardiac arrhythmias. Cardiac sensitization to adrenalin in dogs has been noted following inhalation. In dogs, the heart is more sensitive to epinephrine induced ventricular fibrillations following exposure to 15-90% propane for 10 minutes. Ventricular fibrillations have been reported in humans following inhalation of n-butane.
Skin contact	Contact with liquid may cause cold burns/frostbite.
Eye contact	Contact with liquid may cause cold burns/frostbite.
Ingestion	Not an expected route of exposure.

Information on toxicological effects

Symptoms High concentrations may cause asphyxia from lack of oxygen or act as a narcotic causing central nervous system depression. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

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

Irritation Not classified.
 Sensitization Not classified.
 Germ cell mutagenicity Not classified.
 Carcinogenicity This product does not contain any carcinogens or potential carcinogens listed by OSHA, IARC or NTP.
 Reproductive toxicity Not classified.
 STOT - single exposure Not classified.
 STOT - repeated exposure Not classified.
 Chronic toxicity None known.
 Target Organ Effects Central nervous system (CNS).
 Aspiration hazard Not applicable.

Numerical measures of toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	Inhalation LC50 (CGA P-20)
Propane 74-98-6	-	-	= 658 mg/L (Rat) 4 h	-

Product Information
 Oral LD50 No information available.
 Dermal LD50 No information available.
 Inhalation LC50 No information available
 Inhalation LC50

12. ECOLOGICAL INFORMATION

Ecotoxicity
 No known acute aquatic toxicity.

Persistence and degradability
 No information available.

Bioaccumulation
 Will not bioconcentrate.

Chemical Name	Partition coefficient
Propane 74-98-6	2.3

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Indiana Oxygen for proper disposal.

14. TRANSPORT INFORMATION

Note: In US and Canada, Petroleum gases, liquefied (UN1075), or Liquefied petroleum gas (UN1075) is also acceptable. Identification number used must be consistent on package markings, shipping papers and emergency response information.

DOT

UN/ID no.	UN1978
Proper shipping name	Propane
Hazard Class	2.1
Special Provisions	19, T50
Description	UN1978, Propane, 2.1
Emergency Response Guide Number	115

TDG

UN/ID no.	UN1978
Proper shipping name	Propane
Hazard Class	2.1
Description	UN1978, Propane, 2.1

MEX

UN/ID no.	UN1978
Proper shipping name	Propane
Hazard Class	2.1
Description	UN1978, Propane, 2.1

IATA

UN/ID no.	UN1978
Proper shipping name	Propane
Hazard Class	2.1
ERG Code	10L
Special Provisions	A1
Description	UN1978, Propane, 2.1

IMDG

UN/ID no.	UN1978
Proper shipping name	Propane
Hazard Class	2.1
EmS-No.	F-D, S-U
Description	UN1978, Propane, 2.1

ADR

UN/ID no.	UN1978
Proper shipping name	Propane
Hazard Class	2.1
Classification code	2F
Tunnel restriction code	(B/D)
Special Provisions	652, 657, 660
Description	UN1978, Propane, 2.1, (B/D)

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies
EINECS/ELINCS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified 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	Yes
Sudden release of pressure hazard	Yes
Reactive Hazard	No

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.

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.

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)

Risk and Process Safety Management Programs

This material, as supplied, contains one or more regulated substances with specified thresholds under 40 CFR Part 68 or regulated as a highly hazardous chemical pursuant to the 29 CFR Part 1910.110 with specified thresholds:

Chemical Name	U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Toxic Substances	U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Flammable Substances	U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals
Propane		10000 lb	

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Propane 74-98-6	X	X	X

International Regulations

16. OTHER INFORMATION

NFPA Health hazards 2 Flammability 4 Instability 0 Physical and Chemical Properties -

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2009, CGA Recommended Hazard Ratings for Compressed Gases, 3rd Edition.

Issue Date	23-Feb-2015
Revision Date	28-Jul-2015
Revision Note	Initial Release.

General Disclaimer

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between Indiana Oxygen Company (or any of their affiliates and subsidiaries) and the purchaser.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End of Safety Data Sheet


SAFETY DATA SHEET

Propane

Section 1. Identification

GHS product identifier	: Propane
Chemical name	: propane
Other means of identification	: Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
Product type	: Liquefied gas
Product use	: Synthetic/Analytical chemistry.
Synonym	: Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
SDS #	: 001045
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
24-hour telephone	: 1-866-734-3438

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 GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas
GHS label elements	
Hazard pictograms	: 
Signal word	: Danger
Hazard statements	: Extremely flammable gas. May form explosive mixtures with air. Contains gas under pressure; may explode if heated. May cause frostbite. May displace oxygen and cause rapid suffocation.
Precautionary statements	
General	: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.
Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	: Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	: Protect from sunlight. Store in a well-ventilated place.

Section 2. Hazards identification

- Disposal** : Not applicable.
- Hazards not otherwise classified** : Liquid can cause burns similar to frostbite.

Section 3. Composition/information on ingredients

- Substance/mixture** : Substance
- Chemical name** : propane
- Other means of identification** : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
- Product code** : 001045

CAS number/other identifiers

- CAS number** : 74-98-6

Ingredient name	%	CAS number
Propane	100	74-98-6

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 if irritation occurs.
- 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 adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, 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. As this product rapidly becomes a gas when released, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Liquid can cause burns similar to frostbite.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

Section 4. First aid measures

- Frostbite** : Try to warm up the frozen tissues and seek medical attention.
Ingestion : Ingestion of liquid can cause burns similar to frostbite.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:, frostbite
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:, frostbite
Ingestion : Adverse symptoms may include the following:, frostbite

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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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** : Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. 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.

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

- 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. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

- 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. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Accidental releases pose a serious fire or explosion hazard. 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

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 : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. 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 : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. 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). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

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 a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. 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
Propane	<p>NIOSH REL (United States, 10/2016). TWA: 1800 mg/m³ 10 hours. TWA: 1000 ppm 10 hours.</p> <p>OSHA PEL (United States, 6/2016). TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.</p> <p>ACGIH TLV (United States, 3/2017). Oxygen Depletion [Asphyxiant].</p>

Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: 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. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. 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.
- Thermal hazards** : If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Gas. [Compressed gas.]
- Color** : Colorless.
- Odor** : Odorless.BUT MAY HAVE SKUNK ODOR ADDED.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : -187.6°C (-305.7°F)
- Boiling point** : -161.48°C (-258.7°F)

Section 9. Physical and chemical properties

Critical temperature	: 96.55°C (205.8°F)
Flash point	: Closed cup: -104°C (-155.2°F) Open cup: -104°C (-155.2°F)
Evaporation rate	: Not available.
Flammability (solid, gas)	: Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.
Lower and upper explosive (flammable) limits	: Lower: 1.8% Upper: 8.4%
Vapor pressure	: 109 (psig)
Vapor density	: 1.6 (Air = 1)
Specific Volume (ft³/lb)	: 8.6206
Gas Density (lb/ft³)	: 0.116 (25°C / 77 to °F)
Relative density	: Not applicable.
Solubility	: Not available.
Solubility in water	: 0.02 g/l
Partition coefficient: n-octanol/water	: 1.09
Auto-ignition temperature	: 287°C (548.6°F)
Decomposition temperature	: Not available.
Viscosity	: Not applicable.
Flow time (ISO 2431)	: Not available.
Molecular weight	: 44.11 g/mole
<u>Aerosol product</u>	
Heat of combustion	: -46012932 J/kg

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). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.
Incompatible materials	: Oxidizers
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

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 : Not available.

Potential acute health effects

- Eye contact** : Liquid can cause burns similar to frostbite.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
- Ingestion** : Ingestion of liquid can cause burns similar to frostbite.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:, frostbite
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:, frostbite
- Ingestion** : Adverse symptoms may include the following:, frostbite

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.

Section 11. Toxicological information

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

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Propane	1.09	-	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. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1978	UN1978	UN1978	UN1978	UN1978
UN proper shipping name	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

Additional information

DOT Classification : Limited quantity
Yes.

Packaging instruction
Passenger aircraft
Quantity limitation: Forbidden.

Cargo aircraft
Quantity limitation: 150 kg

Special provisions
19, T50

For domestic transportation only, UN1075 may be substituted for the UN number shown as long as the substitution is consistent on package markings, shipping papers, and emergency response information. See 49 CFR 172.102 Special Provision 19.

Containers of NON-ODORIZED liquefied petroleum gas must be marked either NON-ODORIZED or NOT ODORIZED as of September 30, 2006. [49 CFR 172.301(f), 326(d), 330(c) and 338(e)]

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).
Explosive Limit and Limited Quantity Index 0.125
ERAP Index 3000
Passenger Carrying Ship Index 65
Passenger Carrying Road or Rail Index Forbidden
Special provisions 29, 42

IATA : **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Cargo Aircraft Only: 150 kg.

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) CDR Exempt/Partial exemption: Not determined
Clean Air Act (CAA) 112 regulated flammable substances: propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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 : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Europe : This material is listed or exempted.

Japan : **Japan inventory (ENCS):** This material is listed or exempted.
Japan inventory (ISHL): This material is listed or exempted.

Malaysia : This material is listed or exempted.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Section 15. Regulatory information

Taiwan	: This material is listed or exempted.
Thailand	: Not determined.
Turkey	: This material is listed or exempted.
United States	: This material is listed or exempted.
Viet Nam	: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	2
Flammability		4
Physical hazards		3

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



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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

Classification	Justification
FLAMMABLE GASES - Category 1	Expert judgment
GASES UNDER PRESSURE - Liquefied gas	Expert judgment

History

Date of printing	: 5/6/2018
Date of issue/Date of revision	: 5/6/2018
Date of previous issue	: 6/28/2017
Version	: 1

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

Section 16. Other information

as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References

: Not available.

Other special considerations

: The information below is given to call attention to the issue of "Naturally occurring radioactive materials". Although Radon-222 levels in the product represented by this MSDS do not present any direct Radon exposure hazard, customers should be aware of the potential for Radon daughter build up within their processing systems, whatever the source of their product streams. Radon-222 is a naturally occurring radioactive gas which can be a contaminant in natural gas. During subsequent processing, Radon tends to be concentrated in Liquefied Petroleum Gas streams and in product streams having a similar boiling point range. Industry experience has shown that this product may contain small amounts of Radon-222 and its radioactive decay products, called Radon "daughters". The actual concentration of Radon-222 and radioactive daughters in the delivered product is dependent on the geographical source of the natural gas and storage time prior to delivery. Process equipment (i.e. lines, filters, pumps and reaction units) may accumulate significant levels of radioactive daughters and show a gamma radiation reading during operation. A potential external radiation hazard exists at or near any pipe valve or vessel containing a Radon enriched stream, or containing internal deposits of radioactive material due to the transmission of gamma radiation through its wall. Field studies reported in the literature have not shown any conditions that subject workers to cumulative exposures in excess of general population limits. Equipment emitting gamma radiation should be presumed to be internally contaminated with alpha emitting decay products which may be a hazard if inhaled or ingested. Protective equipment such as coveralls, gloves, and respirator (NIOSH/MHSA approved for high efficiency particulates and radionuclides, or supplied air) should be worn by personnel entering a vessel or working on contaminated process equipment to prevent skin contamination, ingestion, or inhalation of any residues containing alpha radiation. Airborne contamination may be minimized by handling scale and/or contaminated materials in a wet state.

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.



Material Safety Data Sheet

Section I - Product and Company Identification

Supplier Name	Pyramex Safety Products, LLC
Address (number, street, state & zip code)	281A Moore Lane Collierville, TN 38017
Phone Number	1-800-736-8673
Fax Number	1-901-861-4967
Emergency Phone Number	Call INFOTRAC: 1-800-535-5053
Product Name	Pyramex Safety Lens Cleaning Towelette
Trade Names and Synonyms	Towelette , LCT1, LCT100, LCT100SP, LCTAHS, LCTFAS, LCTHAR, LCTWES, LCTSTA, LCC100
Date Issued	12/6/2007
Date Revised	12/3/2009

Section II - Hazards Identification

Potential Health Effects

Principal Routes of Exposure	Skin contact
Acute Toxicity	
Eyes	Vapor May cause irritation.
Inhalation	May be harmful if inhaled. Avoid breathing vapors. May cause irritation of respiratory tract. May cause central nervous system depression with nausea, headache, dizziness, and vomiting.
Skin	May be harmful in contact with skin. May cause irritation.
Ingestion	May be harmful if swallowed. May cause gastro-intestinal irritation, nausea, vomiting and diarrhea.
Chronic Effects	Avoid repeated exposure. Contains a known or suspected reproductive toxin.
Aggravated Medical Conditions	Central nervous system. Preexisting eye disorders. Blood Disorders. Kidney disorders. Liver disorders. Overexposure may cause female and male reproductive disorder(s). Skin Disorders. Respiratory disorders.
Interactions with other Chemicals	Use of Alcoholic beverages may enhance toxic effects.

Section III - Composition/Information on Ingredients

Component	CAS#	%(WT)
Water	773-18-5	60-85
Isopropyl Alcohol	67-63-0	10-30
Anti-Fog	56-81-5	<1
Anti-Static	68391-01-5	<1
Supplier Trade Secret	Proprietary	5-10

Section IV - First Aid Measures

EYES	Flush well with water, also under eyelids, for at least 15 minutes. Get Medical assistance if symptoms persist.
SKIN	Wash well with soap and water. If irritation persists, or allergic reaction occurs, call a physician.
Inhalation	Remove to fresh air and give oxygen if needed. If not breathing, give artificial respiration and call for Medical assistance.
Ingestion	DO NOT induce vomiting. Rinse Mouth. Drink Plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.
Notes to Physicians	Treat symptomatically

Section V - Fire-Fighting Measures			
Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Uniform Fire Code	Irritant: Liquid Combustible Liquid III-B		
Flash Point	Not available		
Hazardous Byproducts of Combustion	Carbon oxides		
Explosion Data			
Sensitivity to Mechanical Impact	Not sensitive		
Sensitivity to Static Discharge	Yes		
Protective Equipment	Wear Self contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent), and full protective gear.		
Special Precautions - NFPA			
Health Hazard	2		
Flammability	1		
Stability	0		
Section VI - Accidental Release Measures			
Personal Precautions	Use personal protective equipment. Avoid contact with skin and eyes. Remove all sources of ignition.		
Containment Methods	Prevent further leakage or spillage if safe to do so.		
Clean-up Methods	Use personal protective equipment. Soak up with absorbent material. Pick up and transfer to properly labeled containers.		
Section VII - Handling and Storage			
Handling	Handle in accordance with good industrial hygiene and safety practices. Avoid contact with skin and clothing. Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of children.		
Storage	Keep container tightly closed. Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of Children.		
Section VIII - Exposure Controls/Personal Protection			
Exposure Guidelines			
Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isopropyl Alcohol	+400 ppm STEL TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 1225 mg/m ³ (vacated) STEL: 500 ppm	IDLH: 2000 ppm 10% LEL TWA: 400 PPM TWA: 980 mg/m ³ STEL: 1225 mg/m ³ STEL: 500 PPM
Supplier Trade Secret	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ Skin	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Engineering Measures		Showers. Eyewash Stations. Ventilation Systems	
Personal Protective Equipment			
Eye & Face Protection		No special equipment required	
Skin & Body Protection		Protective gloves	
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.	
Hygiene Measures		When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.	

Section IX - Physical and Chemical Properties

Appearance	White solid
Odor	Mild Alcohol Smell
Physical State	Solid. Solid containing liquid. Moist paper
pH	7

Section X - Stability and Reactivity

Stability	Stable under recommended storage conditions
Incompatibility (Material to Avoid)	Strong oxidizing agents. Acids. Chlorinated compounds
Conditions to Avoid	Heat, Flames, Sparks
Hazardous Decomposition or By-Products	Carbon oxides
Hazardous Polymerization	Will Not Occur

Section XI - Toxicological Information

Acute Toxicity	May be harmful by inhalation, ingestion or skin absorption
-----------------------	--

Chemical Name	LD50 Oral	LD50 Dermal	LD50 Inhalation
Water	90 mL/kg (Rat)		
Isopropyl Alcohol	4396 mg/kg (Rat)	12800 mg/kg (Rat) 2270 mg/kg (Rabbit)	72.6mg/L (Rat) 4h
Supplier Trade Secret	470 mg/kg (Rat)	220 mg/kg (Rat) 2270 mg/kg (Rabbit)	2.21 mg/L (Rat) 4h 450 ppm (rat) 4h

Chronic Toxicity	Avoid repeated exposure. Contains a known or suspected reproductive toxin.
-------------------------	--

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
Supplier Trade Secret	A3			

ACGIH: American Conference of Governmental Industrial Hygienists

A3: Animal Carcinogen

Target Organ Effects	Blood, Central Nervous System (CNS), Eyes, Hematopoietic System, Kidney, Liver, Respiratory System, Skin.
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Section XII - Ecological Information

Ecotoxicity

The environmental impact of this product has not been fully investigated. Ecotoxicity effects of component substances follows:

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Isopropyl Alcohol	EC50>1000mg/L 72h EC50>1000mg/L 96h	LC50=61200 mg/L Pimephales promelas 96h LC50=94900 mg/L Pimephales promelas 96h LC50=9640 mg/L Pimephales promelas 96h	EC > 5035390 mg/L 5 min.	EC50 = 13299 mg/L 48h
Supplier Trade Secret		LC50=1490 mg/L Lepomis macrochirus 96h		LC50 1698-1940 mg/L 24h EC50=1720 mg/L 24h

Chemical Name	Log Pow
Isopropyl Alcohol	=0.05 25A deg. C
Supplier Trade Secret	=0.81 25A deg. C

Section XIII - Disposal Considerations

Waste Disposal Methods	This material as supplied is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.
-------------------------------	--

Contaminated Materials	Dispose of in accordance with local regulations.
-------------------------------	--

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		
Isopropyl Alcohol		Toxic. Ignitable.		
Section XIV - Transport Information				
DOT, TDG, MEX, ICAO, ITAT, IMDG/IMO, RID, ADR, ADN - Product not regulated.				
Section XV - Regulatory Information				
International Inventories				
TSC -----Complies	IECSC -----Does not comply			
DSL -----Does not comply	KECL -----Does not comply			
EINECS/ELINCS ---Does not comply	PICCS -----Does not comply			
ENCS -----Does not comply	AICS -----Does not comply			
U.S. Federal Regulations				
SARA 313				
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, part 372.				
Chemical Name	CAS No.	% by Weight	SARA 313 - Threshold Values %	
Isopropyl Alcohol	67-63-0	10-30	1	
Supplier Trade Secret	Proprietary	5-10	1	
SARA 313/312 Hazard Categories				
Acute Health Hazard	Yes			
Chronic Health Hazard	Yes			
Fire Hazard	No			
Sudden Pressure Release Hazard	No			
Reactive Hazard	No			
Clean Water Act				
This Product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)				
Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	
Isopropyl Alcohol			X	
Clean Air Act, Sec. 112 Hazardous Air Pollutants (HAPS)(see 40 CFR 61)				
This product contains the following substances which are listed hazardous air pollutants (HAPS) under Sec. 112 of the Clean Air Act.				
Chemical Name	CAS No.	% by Weight	HAPs Data	VOC Chemicals
Supplier Trade Secret	Proprietary	5-10	Present (includes mono-and di-ethers of ethylene glycol and triethylene glycol, except ethylene glycol monobutyl ether [EGBE]. See 40 CFR 63.62 for redefinition of glycol ethers listed as hazardous air pollutants.	Group I
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.				

U.S. State Regulations**California Proposition 65**

This Product does not contain any Proposition 65 Chemicals.

International Regulations**Mexico - Grade**

Moderate risk - Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
Isopropyl Alcohol		Mexico: TWA=26 ppm
		Mexico: TWA=120 mg/m3
		Mexico: STEL=360 mg/m3
		Mexico: STEL=75 ppm
Supplier Trade Secret		Mexico: TWA=400 ppm
		Mexico: TWA=980 mg/m3
		Mexico: STEL=1225 mg/m3
		Mexico: STEL=500 ppm

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR), and the MSDS contains all of the information required by the CPR.

WHMIS Hazard Class

B3 Combustible Liquid
D2B Toxic Materials

Chemical Name	National Pollutant Release Inventory
Isopropyl Alcohol	X
Supplier Trade Secret	X

Section XVI - Other Information

Disclaimer: The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any representation or warranty, expressed or implied, regarding the accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, Pyramex Safety Products, LLC and its Divisions and Subsidiaries, Officers and Employees do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.



SAFETY DATA SHEET

1. Identification

Product identifier	SCRUBS® Hand Cleaner Towels
Other means of identification	
Part Number	42201, 42210, 42225, 42230, 42232, 42256, 42260, 42272, 42274, 42280
Recommended use	A deep cleaning hand cleaner towel designed for removing heavy dirt, oil and greases from hands.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	ITW Pro Brands
Address	805 E. Old 56 Highway Olathe, KS 66061
Country	(U.S.A.)
	Tel: +1 800-443-9536
In Case of Emergency	1-800-535-5053 (Infotrac)

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Alcohols, C12-15, ethoxylated		68131-39-5	1 - 3
Distillates Petroleum Hydrotreated Light		64742-47-8	1 - 3
d-limonene		5989-27-5	1 - 3
Neopentyl Glycol		126-30-7	0.1 - 1
Phenoxyethanol		122-99-6	0.1 - 1
Sodium Dodecanol Sulfosuccinate		577-11-7	0.1 - 1

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Mechanically pick up material and place in a proper container for disposal. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

U.S. - OSHA

Components	Type	Value	Form
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	PEL	5 mg/m ³	Oil mist

ACGIH

Components	Type	Value	Form
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	TWA	5 mg/m ³	Oil mist

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Colorless-blue / white

Odor Citrus

Odor threshold Not available.

pH 6

Melting point/freezing point Not available.

Initial boiling point and boiling range 212 °F (100 °C)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) Miscible.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

Specific gravity 0.995

VOC 0 % per US State and Federal Consumer Product Regulations

10. Stability and reactivity

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

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Alcohols, C12-15, ethoxylated (CAS 68131-39-5)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Vapor</i>		
LC50	Rat	> 0.1 mg/l, 8 Hours
Oral		
LD50	Rat	> 5000 mg/kg
d-limonene (CAS 5989-27-5)		
Acute		
Oral		
LD50	Rat	> 2000 mg/kg
Neopentyl Glycol (CAS 126-30-7)		
Acute		
Oral		
LD50	Rat	> 6400 mg/kg
Phenoxyethanol (CAS 122-99-6)		
Acute		
Dermal		
LD50	Rabbit	> 2200 mg/kg, 24 Hours
Oral		
LD50	Rat	1400 mg/kg
Sodium Dodecanol Sulfosuccinate (CAS 577-11-7)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg, 24 Hours

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
d-limonene (CAS 5989-27-5)	3 Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	
Not listed.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.
Further information	This product has no known adverse effect on human health.

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
Alcohols, C12-15, ethoxylated (CAS 68131-39-5)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.37 - 0.43 mg/l, 48 hours
Fish	LC50	Channel catfish (Ictalurus punctatus)	1.04 - 1.39 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
d-limonene (CAS 5989-27-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	69.6 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.619 - 0.796 mg/l, 96 hours
Phenoxyethanol (CAS 122-99-6)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	337 - 352 mg/l, 96 hours
Sodium Dodecanol Sulfosuccinate (CAS 577-11-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	20 - 40 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

d-limonene	4.232
Phenoxyethanol	1.16

Mobility in soil Not established.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

General information This material is not regulated by any mode of transportation.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of 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)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 04-11-2019

Revision date 06-03-2019

Version # 02

Disclaimer

ITW Pro Brands 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

Accidental release measures: Methods and materials for containment and cleaning up
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group
HazReg Data: International Inventories
GHS: Classification



SAFETY DATA SHEET

1. Identification

Product identifier	SCRUBS® Hand Cleaner Towels
Other means of identification	
Part Number	42201, 42210, 42225, 42230, 42232, 42256, 42260, 42272, 42274, 42280
Recommended use	A deep cleaning hand cleaner towel designed for removing heavy dirt, oil and greases from hands.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	ITW Pro Brands
Address	805 E. Old 56 Highway Olathe, KS 66061
Country	(U.S.A.) Tel: +1 800-443-9536
In Case of Emergency	1-800-535-5053 (Infotrac)

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Alcohols, C12-15, ethoxylated		68131-39-5	1 - 3
Distillates Petroleum Hydrotreated Light		64742-47-8	1 - 3
d-limonene		5989-27-5	1 - 3
Neopentyl Glycol		126-30-7	0.1 - 1
Phenoxyethanol		122-99-6	0.1 - 1
Sodium Dodecanol Sulfosuccinate		577-11-7	0.1 - 1

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Mechanically pick up material and place in a proper container for disposal. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

U.S. - OSHA Components

	Type	Value	Form
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	PEL	5 mg/m ³	Oil mist

ACGIH Components

	Type	Value	Form
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	TWA	5 mg/m ³	Oil mist

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Colorless-blue / white

Odor Citrus

Odor threshold Not available.

pH 6

Melting point/freezing point Not available.

Initial boiling point and boiling range 212 °F (100 °C)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) Miscible.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

Specific gravity 0.995

VOC 0 % per US State and Federal Consumer Product Regulations

10. Stability and reactivity

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

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Alcohols, C12-15, ethoxylated (CAS 68131-39-5)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Vapor</i>		
LC50	Rat	> 0.1 mg/l, 8 Hours
Oral		
LD50	Rat	> 5000 mg/kg
d-limonene (CAS 5989-27-5)		
Acute		
Oral		
LD50	Rat	> 2000 mg/kg
Neopentyl Glycol (CAS 126-30-7)		
Acute		
Oral		
LD50	Rat	> 6400 mg/kg
Phenoxyethanol (CAS 122-99-6)		
Acute		
Dermal		
LD50	Rabbit	> 2200 mg/kg, 24 Hours
Oral		
LD50	Rat	1400 mg/kg
Sodium Dodecanol Sulfosuccinate (CAS 577-11-7)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg, 24 Hours

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
d-limonene (CAS 5989-27-5)	3 Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	
Not listed.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.
Further information	This product has no known adverse effect on human health.

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
Alcohols, C12-15, ethoxylated (CAS 68131-39-5)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.37 - 0.43 mg/l, 48 hours
Fish	LC50	Channel catfish (Ictalurus punctatus)	1.04 - 1.39 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
d-limonene (CAS 5989-27-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	69.6 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.619 - 0.796 mg/l, 96 hours
Phenoxyethanol (CAS 122-99-6)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	337 - 352 mg/l, 96 hours
Sodium Dodecanol Sulfosuccinate (CAS 577-11-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	20 - 40 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

d-limonene	4.232
Phenoxyethanol	1.16

Mobility in soil Not established.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

General information This material is not regulated by any mode of transportation.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of 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)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 04-11-2019

Revision date 06-03-2019

Version # 02

Disclaimer

ITW Pro Brands 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

Accidental release measures: Methods and materials for containment and cleaning up
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group
HazReg Data: International Inventories
GHS: Classification



SAFETY DATA SHEET

1. Identification

Product identifier SCRUBS® In-A-Bucket Hand Cleaner Towels

Other means of identification

Part Number 42201, 42210, 42230, 42232, 42256, 42260, 42272, 42274, 42280

Recommended use A cleaner wipe designed for removing dirt and grease from hands.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name ITW Pro Brands

Address 805 E. Old 56 Highway
Olathe, KS 66061

Country (U.S.A.)

Tel: +1 800-443-9536

In Case of Emergency 1-800-535-5053 (Infotrac)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Not available.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates Petroleum Hydrotreated Light		64742-47-8	1 - 3
Sodium Dodecanol Sulfosuccinate		577-11-7	0.5 - 1
Dimethyl Glutarate		1119-40-0	< 0.5
D-limonene		5989-27-5	< 0.5
Phenoxyethanol		122-99-6	< 0.5

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Mechanically pick up material and place in a proper container for disposal.</p>
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

U.S. - OSHA Components

Components	Type	Value	Form
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	PEL	5 mg/m3	Oil mist

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Glycerin (CAS 56-81-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

ACGIH Components	Type	Value	Form
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)	TWA	5 mg/m ³	Oil mist

US. Workplace Environmental Exposure Level (WEEL) Guides Components	Type	Value	Form
Propylene Glycol (CAS 57-55-6)	TWA	10 mg/m ³	Aerosol.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	Colorless-blue / white

Odor Citrus

Odor threshold Not available.

pH 6

Melting point/freezing point Not available.

Initial boiling point and boiling range 212 °F (100 °C)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) Miscible.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.995
VOC	0 % per US State and Federal Consumer Product Regulations

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	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
3-iodo-2-propynyl-butylcarbamate (CAS 55406-53-6)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	1.1 g/kg
Alcohols, C12-15, ethoxylated (CAS 68131-39-5)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
<i>Vapor</i>		
LC50	Rat	> 100 mg/m ³ , 6 Hours
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Vapor</i>		
LC50	Rat	> 0.1 mg/l, 8 Hours

Components	Species	Test Results
Oral LD50	Rat	> 5000 mg/kg
D-limonene (CAS 5989-27-5)		
Acute		
Oral LD50	Rat	> 2000 mg/kg
Glycerin (CAS 56-81-5)		
Acute		
Oral LD50	Rat	18000 mg/kg
Phenoxyethanol (CAS 122-99-6)		
Acute		
Dermal LD50	Rabbit	> 2200 mg/kg, 24 Hours
Oral LD50	Rat	1400 mg/kg
Propylene Glycol (CAS 57-55-6)		
Acute		
Dermal LD50	Rabbit	> 2000 mg/kg, 24 Hours
Oral LD50	Rat	22000 mg/kg
Sodium Dodecanol Sulfosuccinate (CAS 577-11-7)		
Acute		
Dermal LD50	Rabbit	> 10000 mg/kg, 24 Hours
Oral LD50	Rat	> 1300 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
D-limonene (CAS 5989-27-5)	3 Not classifiable as to carcinogenicity to humans.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not available.	
Chronic effects	Prolonged inhalation may be harmful.	

Further information

This product has no known adverse effect on human health.

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
3-iodo-2-propynyl-butylcarbamate (CAS 55406-53-6)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 0.05 - 0.089 mg/l, 96 hours
Alcohols, C12-15, ethoxylated (CAS 68131-39-5)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 0.37 - 0.43 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 0.96 - 1.4 mg/l, 96 hours
Distillates Petroleum Hydrotreated Light (CAS 64742-47-8)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Bluegill (Lepomis macrochirus) 2.2 mg/l, 4 days
D-limonene (CAS 5989-27-5)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia pulex) 69.6 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 0.619 - 0.796 mg/l, 96 hours
Glycerin (CAS 56-81-5)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 51000 - 57000 mg/l, 96 hours
Phenoxyethanol (CAS 122-99-6)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (Pimephales promelas) 337 - 352 mg/l, 96 hours
Propylene Glycol (CAS 57-55-6)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) > 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 710 mg/l, 96 hours
Sodium Dodecanol Sulfosuccinate (CAS 577-11-7)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 20 - 40 mg/l, 96 hours

Persistence and degradability

No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential**Partition coefficient n-octanol / water (log Kow)**

D-limonene	4.57
Glycerin	-1.76
Phenoxyethanol	1.16
Propylene Glycol	-0.92

Mobility in soil

Not established.

Other adverse effects

None known.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

General information This material is not regulated by any mode of transportation.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

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.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Glycerin (CAS 56-81-5)

Other Flavoring Substances with OSHA PEL's

US state regulations

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

3-iodo-2-propynyl-butylcarbamate (CAS 55406-53-6)

Glycerin (CAS 56-81-5)
Propylene Glycol (CAS 57-55-6)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	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)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 03-05-2021

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. ITW Pro Brands 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.

MATERIAL SAFETY DATA SHEET

SPOTCHECK® DEVELOPER SKD-S2

1. IDENTIFICATION

Company: MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Penetrant inspection developer
Packages: 1 gallon can, 5 gallon pail, 55 gallon drum, aerosol
NFPA Rating: Health 1, Flammability 3, (aerosol 4), Reactivity 0
PIN (Canada): UN 1993
Revision Date: September 5, 2012

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Wt./Wt.%	CAS#	TLV	PEL	LD ₅₀	LC ₅₀
2-propanol	40 – 70	67-63-0	400 ppm	400 ppm	3.6 g/kg(oral/mouse)	Not available
2-propanone	10 – 30	67-64-1	750 ppm	750 ppm	6 g/kg (oral/rat)	Not available
Isobutane (propellant – aerosol only)	30	75-28-5	Not available	1000 ppm	Not available	Not available
Talc	1 - 3	14807-96-6	Not available	2 mg/me	Not available	Not available

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Extremely flammable white liquid and aerosol. Fast evaporating vapors can reach hazardous levels quickly in unventilated spaces.

POTENTIAL HEALTH EFFECTS & SIGNS AND SYMPTOMS OF EXPOSURE:

Skin Contact: Can irritate by removing natural skin oils on long or repeated exposures.
Eyes: Irritating, but does not damage eye tissue.
Inhalation: Causes dizziness and nausea.
Ingestion: Not significant in small (mouthful) amounts.
Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

Skin Contact: Remove contaminated clothing. Wash exposed areas with soap and water. Use soothing lotion.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water.
Inhalation: Remove to fresh air if dizzy or nauseated.
Ingestion: Do not induce vomiting. Accidental ingestion of a single mouthful is not expected to cause significant harm.
NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Non-aerosol and aerosol: Ignition will occur if used near flames, arcs or other ignition sources.
Flash point: 2°F (-16°C) (Pensky-Martens closed cup).
Flammable limits in air: 2% to 15%.
Extinguishing media: Carbon dioxide, foam, water.
Special fire fighting procedures: Keep containers cool with water spray.
Hazardous combustion products: Soot, oxides of carbon.
Unusual fire hazards: Aerosol cans may burst over 130°F (54°C) and add to existing fire.

6. ACCIDENTAL RELEASE MEASURES

Turn off or remove sources of ignition. Mop up or sweep up with absorbent. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Avoid breathing vapors. Avoid eye contact. Avoid repeated or prolonged skin contact. Store away from heat source. Do not spray around arcs or flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls: Use where ventilation will carry vapors away from occupied areas.
Personal protection : Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with filter if sprayed in enclosed, unventilated space.

MAGNAFLUX

A Division of Illinois Tool Works Inc.
 3624 WEST LAKE AVENUE ■ GLENVIEW, ILLINOIS 60026
 TEL 847.657.5300 ■ FAX 847.657.5388
 www.magnaflex.com

9. **PHYSICAL PROPERTIES**

<i>Initial boiling point (bulk):</i>	132° F (55°C) (ASTM D-86)	<i>Vapor pressure:</i>	Bulk: 150mm @ 100°F (38°C). Aerosol: 65 psi @ 75°F (24°C)
<i>Percent volatile:</i>	90%	<i>Vapor density:</i>	3
<i>Density/sp. gravity:</i>	0.87	<i>Evaporation rate:</i>	0.4 of ether
<i>Water solubility:</i>	90	<i>Appearance:</i>	White liquid
<i>pH:</i>	Neutral	<i>Odor:</i>	Alcohol odor

10. **STABILITY AND REACTIVITY**

<i>Stability:</i>	Stable
<i>Incompatibility:</i>	None
<i>Hazardous decomposition products:</i>	When burning, soot, oxides of carbon
<i>Reactivity:</i>	None

11. **TOXICOLOGICAL INFORMATION**

<i>Carcinogenicity:</i>	Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
<i>Threshold limit value (Bulk):</i>	400 ppm
<i>WHMIS information (Canada):</i>	According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity, skin sensitization, or synergistic toxic effects with other materials.

12. **ECOLOGICAL INFORMATION**

No data is available on SKD-S2.

13. **DISPOSAL**

Send to a licensed waste facility for proper disposal.	
<i>RCRA:</i>	Hazardous waste.
<i>U.S. EPA Waste Number:</i>	D001

14. **TRANSPORTATION (These are guidelines, in all cases refer to 49 CFR for proper classification)**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	<u>Non-Aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	Flammable Liquid, n.o.s. (Isopropanol, acetone)	Consumer commodity
<i>Hazard class or division:</i>	3	ORM-D
<i>Identification No.:</i>	UN1993	None
<i>Packing Group:</i>	II	None

IATA: List of Dangerous Goods

	<u>Non-aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	Flammable liquid, n.o.s. (Isopropanol, Acetone)	Aerosols, flammable
<i>Hazard class or division:</i>	3	2.1
<i>Identification No.:</i>	UN1993	UN1950
<i>Packing Group:</i>	II	-

IMDG: General Index

	<u>Non-aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL, ACETONE)	AEROSOLS
<i>Hazard class or division:</i>	3.2	2.1
<i>Identification No.:</i>	UN1993	UN1950
<i>Packing Group:</i>	II	-

15. **REGULATORY INFORMATION**

<i>TSCA:</i>	All ingredients are listed in TSCA inventory.
<i>CERCLA:</i>	Reportable quantity (RQ) for Acetone = 5000 lbs.
<i>SARA TITLE III, Section 313:</i>	Acetone.
<i>California Proposition 65:</i>	This product contains trace amount of chemicals known to the State of California to cause cancer and to cause birth defects or other reproductive harm.
<i>WHMIS Class (Canada):</i>	Non-Aerosol: B-2, D-2B - Aerosol: A, B-5, D-2B
Note:	This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

<i>Revision Statement:</i>	Review
<i>Supersedes:</i>	October 26, 2004
<i>Prepared by:</i>	Tamie Simmons, R&D Manager

MATERIAL SAFETY DATA SHEET
SPOTCHECK[®] DEVELOPER SKD-S2

1. IDENTIFICATION

COMPANY : ITW INDIA PRIVATE LIMITED
 ADDRESS : PLOT NO 51, 52,207 & 208, PHASE – 2, IDA
 TSIIC, PASHAMMYLARAM,
 MEDAK – 502 307, TELANGANA
 INDIA.
 TELEPHONE : 91 – 8455 – 224710
 FAX : 91 – 8455 – 224709
 PRODUCT USE : Developer for dye penetrant inspection
 PACKAGES : Aerosol, 1 L, 5 L, 20 L & 205 L
 NFPA Rating : Health 1, Flammability 3(Aerosol Flammability 4), Reactivity 0.
 Revision Date : May 30, 2015.

2. HAZARDOUS INGREDIENTS

Ingredient	Wt/wt%	CAS#	TLV	PEL	LD 50	LC50
Propan-2-ol	40-70%	67-63-0	400 ppm	400 ppm	3.6g/kg (oral/mouse)	NA
Propan-2-one	10-30%	67-64-1	750 ppm	750 ppm	6g/kg (oral/rat)	NA
Isobutane(propellant – aerosol only)	30%	75-28-5	NA	1000 ppm	NA	NA
Talc	1-3%	14807-96-6	NA	2mg/m3	NA	NA

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Extremely flammable white liquid and aerosol. Fast evaporating vapors can reach hazardous levels quickly in unventilated spaces.

POTENTIAL HEALTH EFFECTS

Skin Contact : Can irritate by removing natural skin oils on long or repeated exposures
 Eyes : Irritating but doesnot damage eye tissue.
 Inhalation : Cause dizziness and nausea
 Ingestion : Not significant in small (mouthful) quantities
Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

Skin Contact : Wash off with soap water .Use soothing lotion
 Eyes : Rinse carefully under upper and lower eyelids using plenty of water
 Inhalation : Remove to fresh air if dizzy or nauseated
 Ingestion : Do not induce vomiting. Accidental ingestion of a small mouthful is not expected to cause significant harm
 NOTE: In all severe cases, contact physician immediately.

5. FIRE HAZARD

Conditions of flammability : Bulk & Aerosol : Ignition will occur if used near flames, arcs or any other ignition source
 Flash point : 2 deg F (-16 deg C) (PMCC)
 Flammable limits in air : 2 to 15%
 Extinguishing media : Carbon dioxide , Foam,Water
 Special fire fighting procedures : Keep containers cool with water spray.
 Hazardous combustion products : Smoke,soot,oxides or carbon
 Unusual fire hazards : Aerosol containers may burst at temperatures over 54 deg C and spray contents into a fire

6. ACCIDENTAL RELEASE MEASURES

Turn off or remove source of ignition. Mop up or sweep up with absorbent(For disposal , see Section 13)

7. HANDLING AND STORAGE

Store away from heat source. Avoid eye contact. Avoid repeated or prolonged skin contact.
 Avoid breathing spray mist.Donot spray around arcs or flames

MSDS/SKD S2/03 dated 07/2015

Page 1 of 3



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 Telephone: +91 8455 224710. Facsimile: +91 8455 224709. E-mail : magnafluxinfo@magnafluxindia.com, Website: www.magnaflux.com

Regd. Office: ITW India Private Limited, Level 1, Lotus Plaza, 732/1, Mehrauli Gurgaon Road, Sector - 14, Gurgaon - 122 001, Haryana, India.
 Telephone : +91 - 124 - 4284381, Facsimile : +91 - 124 - 4284389, E-mail : infoindia@itw.com

Corporate Identity Number (CIN) : U32301HR1979PTC038643

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls : None, unless sprayed. Use where ventilation will carry spray mist away from occupied areas
 Personal protection : Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable.
 Respirator with filter if sprayed in enclosed unventilated space.

9. PHYSICAL PROPERTIES

Initial boiling point (bulk) :	Min 55 deg C	Vapor pressure :	Aerosol 65 psi@24degC, Bulk 150 mm@38degC
Percent volatile :	90%	Vapor density :	3
Density/sp. gravity :	0.8	Evaporation rate :	0.4 of ether
Water solubility :	0 (emulsifies into water)	Appearance :	White liquid
pH :	Neutral	Odor :	Alcohol odour

10. STABILITY AND REACTIVITY

Stability : Stable
 Incompatibility : None
 Hazardous decomposition products : Soot, oxides of carbon and nitrogen when burning
 Reactivity : None

11. TOXICOLOGICAL INFORMATION

Carcinogenicity : Contains no known or suspected carcinogens listed with OSHA, IARC, NTP or ACGIH
 Threshold limit value : 400 ppm
 WHMIS information (Canada) : According to available information, the ingredients have not been found to show reproductive toxicity, Teratogenicity, Mutagenicity, Skin sensitization, or Synergistic toxic effects with other material.

12. ECOLOGICAL INFORMATION

No data is available on SKD-S2

13. DISPOSAL

Send to a licensed waste facility for proper disposal.
 RCRA : Hazardous waste
 U.S EPA Waste Number : D001

14. TRANSPORTATION

U.S.DOT: 49 CFR 172.101 Hazardous Material Table

	<u>Non-aerosol</u>	<u>Aerosol</u>
Proper shipping name :	Flammable liquid, n.o.s (Isopropanol, acetone)	Consumer commodity
Hazard class or division :	3	ORM-D
Identification No. :	UN 1993	None
Packing Group :	II	None

IATA : List of Dangerous Goods

	<u>Non-aerosol</u>	<u>Aerosol</u>
Proper shipping name :	Flammable liquid, n.o.s (Isopropanol, acetone)	Aerosols, flammable
Hazard class or division :	3	2.1
Identification No. :	UN 1993	UN 1950
Packing Group :	II	-

IMDG : General Index

	<u>Non-aerosol</u>	<u>Aerosol</u>
Proper shipping name :	Flammable liquid, n.o.s (Isopropanol, acetone)	Aerosols
Hazard class or division :	3	2.1
Identification No. :	UN 1993	UN 1950
Packing Group :	II	-

15. REGULATORY INFORMATION

TSCA	: All ingredients are listed in TSCA inventory.
CERCLA	: Reportable quantity (RQ) for Acetone = 5000 lbs.
SARA TITLE III, Section 313	: Acetone
California Proposition 65	: This product contains trace amount of chemicals known to the State of California to cause cancer and to cause birth defects or other reproductive harm.
WHMIS Class (Canada)	: Non-Aerosol : B-2, D2-B Aerosol : A,B-5,D2-B

Note ; This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. OTHER INFORMATION

Revision Statement	: Correction of IMDG hazard class
Prepared by	: Sunil N S, Q.C Dept..

MATERIAL SAFETY DATA SHEET

SPOTCHECK® PENETRANT SKL-SP1

1. **Company:** MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Visible inspection penetrant.
Packages: 1 gallon and 5 gallon pails, 20 gallon drums, 55 gallon drums, Totes, aerosols, pens
NFPA Rating: Health 1, Flammability 1, (Aerosol Flammability 4), Reactivity 0
PIN (Canada): None
Revision date: May 1st, 2012

2. HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>Wt./Wt.%</u>	<u>CAS #</u>	<u>TLV</u>	<u>PEL</u>	<u>LD₅₀</u>	<u>LC₅₀</u>
White mineral oil (petroleum)	60-80	8042-47-5 or 64742-47-8	5 mg/m ³	5 mg/m ³	not avail.	not avail.
Phthalic Esters	5-25	71888-89-5	5mg/m ³	not avail.	not avail.	not avail.
Liquefied petroleum gasses (propellant, aerosol only)*	30	68476-86-8	not avail.	1000 ppm	not avail.	not avail.

*Aerosol Package Only

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Bland, oily liquid which may irritate the skin and eyes. Bulk material is difficult to ignite, but will burn vigorously if engulfed in fire. Aerosol is extremely flammable.

POTENTIAL HEALTH EFFECTS, AND SIGNS AND SYMPTOMS OF EXPOSURE:

Skin contact: Can irritate by removing natural skin oils on long or repeated exposures.
Eyes: May irritate.
Inhalation: Not significant at room temperatures. When heated or sprayed, vapors may cause dizziness and nausea.
Ingestion: Not significant in small (mouthful) amounts.
Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

Skin Contact: Wash off with soap and water. Use soothing lotion.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water.
Inhalation: Remove to fresh air if dizzy or nauseated.
Ingestion: Do not induce vomiting. Accidental ingestion of a small mouthful is not expected to cause significant harm.
NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Aerosol: Spraying near an ignition source will ignite spray mist.
 Bulk: None unless heated over 200°F (93°C) near ignition source.
Flash point (Bulk): Min. 200°F (93°C) (Pensky-Martens closed cup)
Flammable limits in air: 1% to 6%
Extinguishing media: Carbon dioxide, foam
Special fire fighting procedures: Keep containers cool with water spray. Do not spray water directly on burning SKL-SP1. It may float and spread the fire.
Hazardous combustion products: Smoke, soot, oxides of carbon and nitrogen.
Unusual fire hazards: Aerosol cans may burst at temperatures over 130°F (54°C) and spray contents into a fire.

6. ACCIDENTAL RELEASE MEASURES

Mop up or sweep up with absorbent. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Store away from heat source. Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist. Do not spray around arcs or flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls: None, unless sprayed. Use where ventilation will carry spray mist away from occupied areas.
Personal protection: Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with filter if sprayed in enclosed unventilated space.

MAGNAFLUX

A Division of Illinois Tool Works Inc.
 3624 WEST LAKE AVENUE ■ GLENVIEW, ILLINOIS 60026
 TEL 847.657.5300 ■ FAX 847.657.5388
 www.magnaflux.com

9. **PHYSICAL PROPERTIES**

Initial boiling point (bulk) Min. 455°F (230°C) (ASTM D-86)
Vapor pressure: Aerosol: 60 psi @ 75°F (24°C) Bulk: <0.10 mm @ 70°F (21°C)
Percent volatile: None (30% in aerosol) *Vapor density:* Heavier than air
Density/sp. gravity: 0.89 *Evaporation rate:* Negligible
Water solubility: 0 *Appearance:* Dark red oily liquid
pH: Neutral *Odor:* Mild oily odor

10. **STABILITY AND REACTIVITY**

Stability: Stable
Incompatibility: None
Hazardous decomposition products: Soot, oxides of carbon and nitrogen when burning
Reactivity: None

11. **TOXICOLOGICAL INFORMATION**

Carcinogenicity: Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
Threshold limited value: 5 mg/m³ for oily mist.
WHMIS information (Canada): No human information is available for teratogenicity, reproductive toxicity, and mutagenicity. No reports of toxicological synerism were located. The ingredients have not been found to show skin sensitization.

12. **ECOLOGICAL INFORMATION**

No data is available on SKL-SP1. It floats on water and can be skimmed off. Its low vapor pressure may exempt it from VOC restrictions. The hydrocarbon propellant is not an ozone depleter.

13. **DISPOSAL**

As a non-hazardous oil waste, incinerate or send to waste handler who can blend it into secondary fuels. Empty aerosol cans before disposal.

14. **TRANSPORTATION**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	<u>1 gal, 5 gal</u>	<u>20 gal, 55 gal. & Totes</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
Consumer commodity		
<i>Hazard class or division:</i>	None	None
ORM-D		
<i>Identification No.:</i>	None	None
None		
<i>Packing Group:</i>	None	None
None		

IATA: List of Dangerous Goods

	<u>1 gal, 5 gal</u>	<u>Bulk</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
Aerosols, flammable		
<i>Hazard class or division:</i>	None	None
2.1		
<i>Identification No.:</i>	None	None
UN1950		
<i>Packing Group:</i>	None	None
-		

IMDG: General Index

	<u>1 gal, 5 gal</u>	<u>Bulk</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
AEROSOLS		
<i>Hazard class or division:</i>	None	None
2.1		
<i>Identification No.:</i>	None	None
UN1950		
<i>Packing Group:</i>	None	None
-		

15. **REGULATORY INFORMATION**

TSCA: All ingredients are listed in TSCA inventory

CERCLA: Not reportable.

SARA TITLE III, Section 313: No reportable ingredients.

WHMIS Class (Canada): Bulk: D-2A Aerosol: A, B-5, D-2A

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

Revision Statement: Sections: 1, 2

Supersedes: 8/15/03

Prepared by: Shawn Kilty, Research Chemist



SAFETY DATA SHEET

Issuing Date 13-Sept-2013

Revision Date 22-Oct-2014

Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name SCRUBS® In-A-Bucket

Other means of identification

Product Code(s) 42201, 42210, 42225, 42230, 42256, 42272

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Heavy Duty Hand Cleaner

Uses advised against None reasonably foreseeable

Supplier's details

Supplier Address

ITW Pro Brands
805 E. Old 56 Highway
Olathe, KS 66061
TEL: 1-800-443-9536

Emergency telephone number

Emergency Telephone Number 800-535-5053 Infotrac

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word

None

The product contains no substances which at their given concentration are considered to be hazardous to health

Appearance Colorless-blue/white

Physical State Liquid.

Odor Citrus

Precautionary Statements

Prevention

- None

General Advice

- None

Storage

- None

Disposal

- None

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

Toxic to aquatic life. Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Alcohols, C12-15, ethoxylated	68131-39-5	1-5	*
Isoparaffinic Hydrocarbon	64742-47-8	1-5	*
Dimethyl adipate	627-93-0	1-5	*
Diethylhexyl sodium sulfosuccinate	577-11-7	1-5	*
D-Limonene	5989-27-5	1-5	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin Contact	None normally required. Material is designed for skin cleansing. Get medical attention if irritation develops and/or persists.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Not an expected route of exposure. If large quantities of this material are swallowed, call a physician immediately.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Not expected to give rise to an acute hazard under normal condition of use.

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. Carbon dioxide (CO₂). Foam. Water spray or fog.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical

None in particular

Hazardous Combustion Products Carbon dioxide (CO₂). Carbon monoxide. Hydrocarbons. Hydrogen sulfide. Sulfur dioxide. Soot.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

Use water spray to cool surrounding containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal Precautions Use personal protective equipment.

Environmental Precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. Avoid release to the environment. See Section 12 for additional Ecological Information. Dispose of contents/container to an approved waste disposal plant.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Small spillage: Wipe up with absorbent material (e.g. cloth, fleece). Large spillage: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Handling Avoid contact with eyes. Do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep container closed when not in use. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Do not contaminate food or feed stuffs. Keep out of the reach of children.

Incompatible Products Strong oxidizing agents. Strong acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters**

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Measures Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/Face Protection	No special protective equipment required.
Skin and Body Protection	No special protective equipment required.
Respiratory Protection	None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.
Hygiene Measures	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	Colorless-blue/white
Odor	Citrus	Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	6	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	212 °F	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	>1	None known
Relative Density	No data available	None known
Specific Gravity	0.995	None known
Water Solubility	Miscible with water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties	Not flammable
Explosive Properties	No data available
Oxidizing Properties	No data available

Other information

VOC Content (%)	0%
------------------------	----

10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Incompatible products.

Incompatible materials

Strong oxidizing agents. Strong acids.

Hazardous decomposition products

Carbon dioxide (CO₂). Carbon monoxide (CO). Hydrocarbons. Hydrogen sulfide. Sulfur dioxide. Soot.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation	Not an expected route of exposure
Eye Contact	Contact with eyes may cause irritation.
Skin Contact	May cause mild skin irritation.
Ingestion	Not an expected route of exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
D-Limonene		Group 3	-	-

IARC: (International Agency for Research on Cancer)

Group 3: Not Classifiable as to its Carcinogenicity to Humans

Reproductive Toxicity This product does not contain any known or suspected reproductive hazards.
STOT - single exposure None of the ingredients are known to cause specific target organ effects from a single exposure.
STOT - repeated exposure None of the ingredients are known to cause specific target organ effects through prolonged or repeated exposure.
Aspiration Hazard None of the ingredients are known to be an aspiration hazard.

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 42888 mg/kg; Acute toxicity estimate
LD50 Dermal 329859 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)

Isoparaffinic Hydrocarbon 64742-47-8		LC50 96 h: = 45 mg/L flow-through (Pimephales promelas) LC50 96 h: = 2.2 mg/L static (Lepomis macrochirus) LC50 96 h: = 2.4 mg/L static (Oncorhynchus mykiss)		LC50 96 h: = 4720 mg/L (Den-dronereides heteropoda)
Diethylhexyl sodium sulfosuccinate 577-11-7		LC50 96 h: 20 - 40 mg/L semi-static (Oncorhynchus mykiss) LC50 96 h: < 24 mg/L static (Oncorhynchus mykiss) LC50 96 h: = 37 mg/L static (Lepomis macrochirus)		EC50 48 h: = 36 mg/L (Daphnia magna)
D-Limonene 5989-27-5		LC50 96 h: 0.619 - 0.796 mg/L flow-through (Pimephales promelas) LC50 96 h: = 35 mg/L (Oncorhynchus mykiss)		
Dimethyl glutarate 1119-40-0		LC50 96 h: 19.6-26.2 mg/L static (Pimephales promelas)		EC50 48 h: 122.1 - 163.5 mg/L (Daphnia magna)
1,3-Propanediol, 2,2-dimethyl- 126-30-7	EC50 72 h: > 1000 mg/L (Pseudokirchneriella subcapitata) EC50 72 h: > 500 mg/L (Desmodesmus subspicatus)	LC50 96 h: > 1000 mg/L semi-static (Oryzias latipes)		EC50 24 h: > 1000 mg/L (Daphnia magna)
Isopropyl myristate 110-27-0	EC50 72 h: > 100 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 8400 mg/L (Brachydanio rerio) LC50 96 h: = 8400 mg/L semi-static (Brachydanio rerio)	-	EC50 48 h: = 100 mg/L (Daphnia magna)
2-Phenoxyethanol 122-99-6	EC50 72 h: > 500 mg/L (Desmodesmus subspicatus)	LC50 96 h: 337 - 352 mg/L flow-through (Pimephales promelas) LC50 96 h: = 366 mg/L static (Pimephales promelas) LC50 96 h: 220 - 460 mg/L static (Leuciscus idus)	EC50 = 32.4 mg/L 5 min EC50 = 880 mg/L 17 h	EC50 48 h: > 500 mg/L (Daphnia magna)
Propylene glycol 57-55-6	EC50 96 h: = 19000 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: = 51600 mg/L static (Oncorhynchus mykiss) LC50 96 h: 41 - 47 mL/L static (Oncorhynchus mykiss) LC50 96 h: = 51400 mg/L static (Pimephales promelas) LC50 96 h: = 710 mg/L (Pimephales promelas)	EC50 = 710 mg/L 30 min	EC50 24 h: > 10000 mg/L (Daphnia magna) EC50 48 h: > 1000 mg/L Static (Daphnia magna)
Glycerin 56-81-5	-	LC50 96 h: 51 - 57 mL/L static (Oncorhynchus mykiss)	-	EC50 24 h: > 500 mg/L (Daphnia magna)
Iodopropynyl butylcarbamate 55406-53-6		LC50 96 h: 0.049-0.079 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: 0.05-0.089 mg/L (Oncorhynchus mykiss) LC50 96 h: 0.14-0.32 mg/L flow-through (Lepomis macrochirus) LC50 96 h: 0.18-0.23 mg/L flow-through (Pimephales promelas)		

Persistence and Degradability No information available.

Bioaccumulation No information available.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
D-Limonene	Toxic

14. TRANSPORT INFORMATION

DOT

Not regulated

15. REGULATORY INFORMATION

International Inventories**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory. All components of this product are either listed or are exempt on the TSCA inventory.

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION								
<u>NFPA</u>	Health Hazard	1	Flammability	0	Instability	0	Physical and Chemical Hazards	-
<u>HMIS</u>	Health Hazard	1	Flammability	0	Physical Hazard	0	Personal Protection	X

**Indicates a chronic health hazard.*

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Issuing Date	13-Sep-2013
Revision Date	13-Sep-2013
Revision Note	Initial Release.

General Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Section 1: IDENTIFICATION**1.1 PRODUCT IDENTIFIER**

Product Name: SKD-S2 Aerosol
Product Code: Not available.

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Use: Non-Destructive Testing.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Magnaflux
155 Harlem Avenue,
Glenview, Illinois
60025

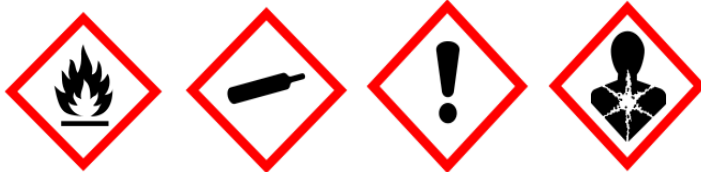
Telephone Number: 847-657-5300

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: CHEMTREC 800-424-9300
Date of Preparation: November 25, 2013 **Version #:** 1.1

Section 2: HAZARD(S) IDENTIFICATION**2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012****Hazard class**

Flammable Aerosol 1
Gases Under Pressure - Compressed Gas
Eye irritation 2A
Specific target organ toxicity - Single exposure 3
Specific target organ toxicity - Repeated exposure 1

2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012**Hazard Pictogram:**

Signal Word: Danger

Hazard Statement: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause drowsiness or dizziness. Causes damage to lungs through prolonged or repeated exposure.

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. Wash

hands thoroughly after handling. Wear eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

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 inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

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

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

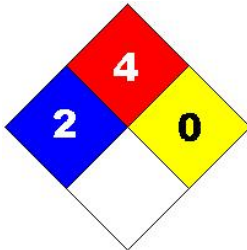
2.3 ADDITIONAL INFORMATION

Hazards not otherwise classified: Not applicable.

2 % of the mixture consists of ingredient(s) of unknown acute toxicity.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

Mexico Classification:



Blue = Health Red = Flammability Yellow = Reactivity White = Special

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

- Class A - Compressed Gas
- Class B5 - Flammable Aerosol
- Class D2A - Chronic Toxic Effects
- Class D2B - Eye Irritant

WHMIS Hazard Symbols:



WHMIS Signal Word:

DANGER

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Ingredient	UN #	H / F / R / *	CAS No	Wt. %
Isopropanol	UN1219	1/3/0	67-63-0	30 - 49
Petroleum gases, liquefied, sweetened	UN1075	Not available.	68476-86-8	15 - 40
Acetone	UN1090	1/3/0	67-64-1	10 - 30
Ceramic materials and wares, chemicals	Not available.	Not available.	66402-68-4	3 - 7
Talc	Not available.	Not available.	14807-96-6	1 - 5
Silica, crystalline, quartz	Not available.	Not available.	14808-60-7	< 0.1

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

* Per NOM-018-STPS-2000

Section 4: FIRST- AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURE

- Eye:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, including under lids. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
- Skin:** In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.
- Inhalation:** If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Eye:** Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Skin:** May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
- Inhalation:** May cause respiratory tract irritation. May cause drowsiness or dizziness.
- Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

- Note to Physicians:** Symptoms may not appear immediately.
- Specific Treatments:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Section 5: FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY

Flammability: Flammable by WHMIS/OSHA/NOM-018-STPS-2000 criteria.

5.2 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Water, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

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

Methods for Cleaning-Up: Scoop up material and place in a disposal container. Provide ventilation.

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: Keep away from sources of ignition. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Container may explode if heated. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Do not swallow. Use only outdoors or in a well-ventilated area. When using do not eat, drink or smoke. Use non-sparking tools. (See section 8)

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Store locked up. Protect from sunlight. Do not store at temperatures above 50 °C / 122 °F. Store in a well-ventilated place. (See section 10)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS
Exposure Guidelines

Occupational Exposure Limits		
Ingredient	OSHA-PEL	ACGIH-TLV
Isopropanol	400 ppm	200 ppm
Petroleum gases, liquefied, sweetened	1000 ppm	1000 ppm
Acetone	1000 ppm TWA; 2400 mg/m ³ TWA	500 ppm
Ceramic materials and wares, chemicals	5 mg/m ³	Not available.
Talc	20 mppcf	2 mg/m ³ (resp)
Silica, crystalline, quartz	((10 mg/m ³)/(%SiO ₂ +2) TWA (resp)) ((30 mg/m ³)/(%SiO ₂ +2) TWA (total)) ((250)/(%SiO ₂ +5) mppcf TWA (resp))	0.025 mg/m ³

8.2 EXPOSURE CONTROLS

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

8.3 INDIVIDUAL PROTECTIVE MEASURES
Personal Protective Equipment:

Eye/Face Protection: Safety glasses or goggles are recommended when using product.

Skin Protection:

Hand Protection: Chemical-resistant gloves.

Body Protection: Wear suitable protective clothing.

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

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

Section 9: PHYSICAL AND CHEMICAL PROPERTIES
9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White liquid.

Color: White.

Odor: Alcohol.

Odor Threshold: Not available.

Physical State: Gas/Pressurized Liquid.

pH: Neutral.

Melting Point/Freezing Point: Not available.

Initial Boiling Point and Boiling Range: ~ 55 °C (~ 132 °F)

Flash Point:	Not applicable
Evaporation Rate:	0.4 (Ether = 1)
Flammability:	Flammable.
Lower Flammability/Explosive Limit:	2 %
Upper Flammability/Explosive Limit:	15 %
Vapor Pressure:	65 psi @ 24 °C (75 °F)
Vapor Density:	3
Relative Density/Specific Gravity:	0.87
Solubility:	Partial.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Oxidizing Properties:	Not available.
Explosive Properties:	Not available.

Section 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not pierce or burn, even after use.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Heat. Incompatible materials. Sources of ignition.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizing agents.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation. May cause drowsiness or dizziness.

Acute Toxicity:

Ingredient	IDLH	LC50	LD50
Isopropanol	2,000 ppm	Inhalation 72.6 mg/L 4h, rat	Oral 4396 mg/kg, rat Dermal 12800 mg/kg, rat Dermal 12870 mg/kg, rabbit
Petroleum gases, liquefied, sweetened	Not available.	Inhalation 658 mg/L 4h, rat	Not available.
Acetone	2,500 ppm	Inhalation 50100 mg/m ³ 8h, rat	Oral 5800 mg/kg, rat
Ceramic materials and wares, chemicals	Not available.	Not available.	Oral > 2000 mg/kg, rat Dermal > 2500 mg/kg, rabbit
Talc	1,000 mg/m ³	Not available.	Not available.
Silica, crystalline, quartz	25 mg/m ³ (Cristobalite & Tridymite) 50 mg/m ³ (Quartz & Tripoli)	Not available.	Oral 500 mg/kg, rat

Calculated overall Chemical Acute Toxicity Values

LC50 (inhalation)	LD50 (oral)	LD50 (dermal)
> 5 mg/L 4h, rat	> 2000 mg/kg, rat	> 2000 mg/kg, rabbit

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Isopropanol	G-A4, I-3
Petroleum gases, liquefied, sweetened	Not listed.
Acetone	G-A4
Ceramic materials and wares, chemicals	Not listed.
Talc	G-A4, I-3
Silica, crystalline, quartz	G-A2, I-1, N-1, O, CP65

* See Section 15 for more information.

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory Sensitization: Based on available data, the classification criteria are not met.

Skin Sensitization: Based on available data, the classification criteria are not met.

STOT-Single Exposure: May cause drowsiness or dizziness.

Chronic Health Effects:

- Carcinogenicity:** Based on available data, the classification criteria are not met.
- Germ Cell Mutagenicity:** Based on available data, the classification criteria are not met.

Reproductive Toxicity:

- Developmental:** Based on available data, the classification criteria are not met.
- Teratogenicity:** Based on available data, the classification criteria are not met.
- Embryotoxicity:** Based on available data, the classification criteria are not met.
- Fertility:** Based on available data, the classification criteria are not met.

STOT-Repeated Exposure: Causes damage to lungs through prolonged or repeated exposure.

Aspiration Hazard: Based on available data, the classification criteria are not met.

Toxicologically Synergistic Materials: Not available.

Other Information: Not available.

Section 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.

12.2 PERSISTENCE AND DEGRADABILITY

Not available.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not available.

12.4 MOBILITY IN SOIL

Not available.

12.5 OTHER ADVERSE EFFECTS

Not available.

Section 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

Section 14: TRANSPORT INFORMATION

DOT	Consumables, Limited Quantity
-----	-------------------------------

IATA	UN 1950, Aerosols, Flammable, 2.1
IMDG	UN 1950, Aerosols, 2.1 (Limited Quantity)

Section 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

Canada: 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.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Mexico: MSDS prepared pursuant to NOM-018-STPS-2000.

SARA Title III				
Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Isopropanol	Not listed.	Not listed.	Not listed.	313
Petroleum gases, liquefied, sweetened	Not listed.	Not listed.	Not listed.	Not listed.
Acetone	Not listed.	Not listed.	5,000	Not listed.
Ceramic materials and wares, chemicals	Not listed.	Not listed.	Not listed.	Not listed.
Talc	Not listed.	Not listed.	Not listed.	Not listed.
Silica, crystalline, quartz	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:

This product contains a chemical known to the State of California to cause cancer.

Global Inventories:

Ingredient	Canada DSL/NDSL	USA TSCA
Isopropanol	DSL	Yes.
Petroleum gases, liquefied, sweetened	DSL	Yes.
Acetone	DSL	Yes.
Ceramic materials and wares, chemicals	DSL	Yes.
Talc	DSL	Yes.
Silica, crystalline, quartz	DSL	Yes.

NFPA-National Fire Protection Association:

Health:	2
Fire:	4
Reactivity:	0

HMIS-Hazardous Materials Identification System:

--

Health:	2*
Fire:	4
Physical Hazard:	0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

CP65 California Proposition 65

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Date of Preparation: November 25, 2013

Expiry Date: November 25, 2016

Version: 1.1

Revision Date: June 9, 2015

Conforms to OSHA HazCom 2012, CPR & NOM-018-STPS-2000 Standards

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.

Prepared by: Nexreg Compliance Inc.
 Phone: (519) 488-5126
www.nexreg.com

Prepared for: Magnaflux

End of Safety Data Sheet

SPOTCHECK[®] SKC-S

1. IDENTIFICATION

Company: MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Nondestructive testing material
NFPA Rating: Health 1, Flammability 3, Reactivity 0
Revision Date: March 21, 2014

2. HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>Wt./Wt. %</u>	<u>CAS #</u>	<u>TLV</u>	<u>PEL</u>	<u>LD₅₀</u>	<u>LC₅₀</u>
		64742-89-8				
		Or	300ppm		5 g/kg	3400 ppm
Light aliphatic solvent naphtha	60-100	64742-49-0	(8 hr.TWA)	not avail.	(oral/rat)	(4hrs/rat)
Carbon dioxide propellant (Aerosol Only)	3-7	124-38-9	not avail.	5000 ppm	not avail.	not avail.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable liquid and aerosol. Vapor may cause flash fire. Harmful or fatal if swallowed. Mist or vapor may irritate the respiratory tract. Liquid contact may cause eye and skin irritation. Over- exposure may cause central nervous system (CNS) depression and target organ effects. Spills may create a slipping hazard.

POTENTIAL HEALTH EFFECTS & SIGNS AND SYMPTOMS OF EXPOSURE:

Skin Contact: Irritating to skin. Repeated exposure may cause skin dryness or cracking.
Eyes: Vapors may be irritating to the eye.
Inhalation: Vapors expected to be slightly irritating. Vapors may cause drowsiness and dizziness.
Ingestion: Harmful: may cause lung damage if swallowed.
Medical conditions known to be aggravated by exposure to product: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes, Skin, and Respiratory system.

4. FIRST AID

Skin Contact: Wash off with soap and water. Do not use ointments. Seek medical attention if tissue appears damaged or if pain or irritation persists.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persists, transport to the nearest medical facility for additional treatment.
Inhalation: Remove to fresh air if dizzy or nauseated. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Ingestion: Do not induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Bulk and aerosol: Readily ignited in presence of ignition sources.
Flash point: Min. 57°F (14°C) (Pensky-Martens) closed cup.
Flammable limits in air: 1% to 6%.
Extinguishing media: Carbon dioxide, foam
Special fire fighting procedures: Keep containers cool with water spray. Do not spray water directly on burning SKC-S. It will float and spread the fire.
Hazardous combustion products: Smoke, soot, oxides of carbon.
Unusual fire hazards: Aerosol cans may burst if heated above 130°F (54°C) and spray contents into a fire.

6. ACCIDENTAL RELEASE MEASURES

Flammable Liquid! Release causes an immediate fire or explosion hazard. Do not touch or walk through spilled material. Prevent spilled material from entering waterways, sewers, basements, or confined area.
 Mop up or sweep up with absorbent. Use only non-sparking tools to collect absorbed material. Avoid contact with spilled or released material. Immediately remove all contaminated clothing. (For disposal, see Section 13.)

7. **HANDLING AND STORAGE**

Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist. Do not spray near arcs or flames. Use only in well ventilated areas. Wash thoroughly after handling.
Storage Level 3 Aerosols per NFPA 30B

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Controls: Use where ventilation will carry spray mist away from occupied areas.
Personal protection: Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with solvent vapor absorbing cartridge if used in enclosed, unventilated space.
Warning: Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of flammable vapors and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

9. **PHYSICAL PROPERTIES**

Initial boiling point (bulk):	Min. 245°F (118°C) (ASTM D-86)	Vapor pressure:	12 and 16 oz. Aerosol: 105psi @ 75°F(24°C) Bulk: 1.5 – 2.0 kPa at 20°C/68.0°F
VOC Content (EPA Method 24):	750 g/L	Vapor density:	4.1
Density/sp. gravity:	0.76	Evaporation rate:	Fast
Water solubility:	0	Appearance:	Clear, colorless liquid
pH:	Neutral	Odor:	Naphtha odor

10. **STABILITY AND REACTIVITY**

Stability: Stable under normal conditions of use
Incompatibility: Avoid heat, sparks, open flames and other ignition sources. Avoid strong oxidizing agents.
Hazardous decomposition products: A complex mixture of airborne solids, liquids, and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
Reactivity: None

11. **TOXICOLOGICAL INFORMATION**

Carcinogenicity: Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
Threshold limit value: 300 ppm
WHMIS information (Canada): According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity, skin sensitization, or synergistic toxic effects with other materials.

12. **ECOLOGICAL INFORMATION**

No data is available on SKC-S. It floats on water. Components will evaporate rapidly.

13. **DISPOSAL**

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.
U.S. EPA Waste Number: D001

14. **TRANSPORTATION**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	<u>Non-Aerosol</u>	<u>Aerosol</u>
Proper shipping name:	Petroleum distillates, n.o.s.	Consumables
Hazard class or division:	3	None None
Identification No.:	UN1268	None
Packing Group:	II	
IATA: List of Dangerous Goods	Non-Aerosol	Aerosol
Proper shipping name:	Petroleum distillates, n.o.s.	Aerosols, flammable
Hazard class or division:	3	2.1
Identification No.:	UN1268	UN1950
Packing Group:	II	-

IMDG: General Index	<u>Non-Aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	PETROLEUM DISTILLATES, N.O.S.	AEROSOLS
<i>Hazard class of division:</i>	3.2	2.1
<i>Identification No.:</i>	UN1268	UN1950
<i>Packing Group:</i>	II	-

15. **REGULATORY INFORMATION**

TSCA: All ingredients are listed in TSCA inventory. Canadian DSL: All ingredients are listed in the Canadian DSL

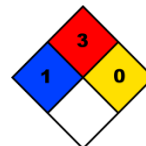
CERCLA: VM&P Naphtha (64742-89-8) Reportable Quantity 66,667 lbs.

SARA TITLE III, Section 313: Xylene, Mixed Isomer (1330-20-7) <0.13%; meta-Xylene (108-38-3) <0.05%; Ethylbenzene (100-41-4) <0.1%; Benzene (71-43-2) <0.005%; Toluene (108-88-3) <0.1%, Naphthalene: <0.002%

California Proposition 65: Warning: This material may contain trace amounts of chemicals known to the state of California to cause cancer and/or birth defects and/or reproductive harm.

WHMIS Class (Canada): Non-Aerosol: B-2, D-2B; Aerosol: A, B-5, D-2B

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.



16. **OTHER INFORMATION**

Revision Statement: Section 1
Supersedes: April 1, 2013



SAFETY DATA SHEET

Revision Date 11-Nov-2020

Version 15

1. IDENTIFICATION

Product identifier

Product Name Spray Nine® 32 fl.oz

Other means of identification

Product Code 26832

Recommended use of the chemical and restrictions on use

Recommended Use Liquid cleaner

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

24-hour emergency phone number

Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

May Also Be Distributed by:

ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Clear

Physical state Liquid

Odor Citrus

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES**Description of first aid measures**

General advice	If symptoms persist, call a physician.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 Avoid contact with eyes and skin. Wash thoroughly after handling. 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 Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. 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 from freezing. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible materials Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Eyewash stations

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.
Skin and body protection	For prolonged use, wear protective natural rubber, nitrile rubber, neoprene, or PVC gloves.
Respiratory protection	No protection equipment is needed under normal use conditions. If respiratory irritation is experienced a NIOSH approved air-purifying respirator with organic vapor cartridges or canisters may be required.
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	Clear
Odor	Citrus
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	12.0-12.8	Low free alkalinity
Melting point / freezing point	No information available	
Boiling point / boiling range	100 °C / 212 °F	
Flash point	> 95 °C / > 203 °F	Tag Closed Cup
Evaporation rate	< 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	18 mm Hg	
Vapor density	>1	Air = 1
Relative density	1.02 g/ml	
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
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

Keep from freezing. Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents

Hazardous Decomposition Products

Carbon oxides

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.
Ingestion	Ingestion may cause irritation to mucous membranes.

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	39779 mg/kg
ATEmix (dermal)	76980 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of wastes	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated packaging	Do not reuse container.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT	
Proper shipping name	Not regulated
IATA	
Proper shipping name	Not regulated
IMDG	
Proper shipping name	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not determined
ENCS	Not determined
IECSC	Complies
KECL	Not determined
PICCS	Not determined
AICS	Not determined

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
SODIUM HYDROXIDE 1310-73-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 6659-3

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.

WHMIS Hazard Class

Non-controlled

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 1	Flammability 1	Instability 0	-
<u>HMIS</u>	Health hazards 1	Flammability 1	Physical hazards 0	Personal protection B

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Revision Date 11-Nov-2020

Disclaimer

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End of Safety Data Sheet



SAFETY DATA SHEET

Revision Date 18-Mar-2019

Version 11

1. IDENTIFICATION

Product identifier

Product Name Spray Nine® 32 fl.oz

Other means of identification

Product Code 26832

Recommended use of the chemical and restrictions on use

Recommended Use Liquid cleaner

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

24-hour emergency phone number

Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

May Also Be Distributed by:

ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Clear

Physical state Liquid

Odor Citrus

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES**Description of first aid measures**

General advice	Get medical advice/attention if you feel unwell.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	IF ON SKIN: Wash skin with soap and water. If skin irritation persists, call a physician. Take off contaminated clothing and wash before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	IF SWALLOWED: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**Carbon dioxide (CO₂), Dry chemical, Foam**Unsuitable extinguishing media**

None

Specific hazards arising from the chemical

None in particular.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes and skin. Wash thoroughly after handling.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep from freezing.

Incompatible materials Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Eyewash stations

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	Clear
Odor	Citrus
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	12.0 - 12.8	Low free alkalinity
Melting point / freezing point	No information available	
Boiling point / boiling range	100 °C / 212 °F	
Flash point	> 95 °C / > 203 °F	Tag Closed Cup
Evaporation rate	< 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	18 mm Hg	
Vapor density	>1	Air = 1
Relative density	1.02 g/ml	
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	
<u>Other Information</u>		
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	<0.5%	
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

Keep from freezing.

Incompatible materials

Strong oxidizing agents

Hazardous Decomposition Products

Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.
Ingestion	Ingestion may cause irritation to mucous membranes.

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 39421 mg/kg
ATEmix (dermal) 76980 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

3.17 % 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	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	Not applicable

14. TRANSPORT INFORMATION

DOT

Proper shipping name: Not regulated

IATA

Proper shipping name: Not regulated

IMDG

Proper shipping name: Not regulated

15. REGULATORY INFORMATION**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not determined
ENCS	Not determined
IECSC	Complies
KECL	Not determined
PICCS	Not determined
AICS	Not determined

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
SODIUM HYDROXIDE 1310-73-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 6659-3

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.

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 18-Mar-2019

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Safety Data Sheet California CARB Compliant

1 - Identification

<p>Product Name: WD-40 Multi-Use Product Aerosol</p> <p>Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion</p> <p>Restrictions on Use: None identified</p> <p>SDS Date Of Preparation: March 5, 2019</p>	<p>Manufacturer: WD-40 Company</p> <p>Address: 9715 Businesspark Avenue San Diego, California, USA 92131</p> <p>Telephone:</p> <p>Emergency: 1-888-324-7596</p> <p>Information: 1-888-324-7596</p> <p>Chemical Spills: 1-800-424-9300 (Chemtrec) 1-703-527-3887 (International Calls)</p>
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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/m ³ TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m ³ TWA (Inhalable) ACGIH TLV (as Mineral oil) 5 mg/m ³ TWA OSHA PEL (as Oil mist, mineral)
Aliphatic Hydrocarbon	1200 mg/m ³ 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 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% MIR=0.43gO3/gVOC	Pour Point:	-63°C (-81.4°F) ASTM 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: Acute Health, Fire Hazard, Sudden Release of Pressure

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: March 5, 2019

Supersedes: July 19, 2018

Revision Summary: Section 9 update VOC data

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

Reviewed by: I. Kowalski

Regulatory Affairs Dept.

1012200/No.0084704



GHS SAFETY DATA SHEET

WELD-ON® 717™ Low VOC Cements for PVC Plastic Pipe

Date Revised: JUN 2018

Supersedes: NOV 2017

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WELD-ON® 717™ Low VOC Cements for PVC Plastic Pipe**PRODUCT USE:** Low VOC Solvent Cement for PVC Plastic Pipe**SUPPLIER:****MANUFACTURER:** IPS Corporation

17109 South Main Street, Gardena, CA 90248-3127

P.O. Box 379, Gardena, CA 90247-0379

Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)**Medical:** CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	None Known	Flammable Liquid	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	None Known		
Skin Sensitization:	NO				
Eye:	Category 2				

GHS LABEL:**Signal Word:**

Danger

WHMIS CLASSIFICATION: CLASS B, DIVISION 2

CLASS D, DIVISION 1B

Hazard Statements

H225: Highly flammable liquid and vapor

H319: Causes serious eye irritation

H332: Harmful if inhaled

H335: May cause respiratory irritation

H336: May cause drowsiness or dizziness

H351: Suspected of causing cancer

EUH019: May form explosive peroxides

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking

P261: Avoid breathing dust/fume/gas/mist/vapors/spray

P280: Wear protective gloves/protective clothing/eye protection/face protection

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P403+P233: Store in a well ventilated place. Keep container tightly closed

P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION
				% by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	25 - 70
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	5 - 36
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	10 - 25

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

Indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.**Skin contact:** Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.**Inhalation:** Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.**Ingestion:** Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.**Likely Routes of Exposure:** Inhalation, Eye and Skin Contact**Acute symptoms and effects:****Inhalation:** Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.**Eye Contact:** Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.**Skin Contact:** Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.**Ingestion:** May cause nausea, vomiting, diarrhea and mental sluggishness.**Chronic (long-term) effects:** Category 2 Carcinogen

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.**Unsuitable Extinguishing Media:** Water spray or stream.**Exposure Hazards:** Inhalation and dermal contact**Combustion Products:** Oxides of carbon, hydrogen chloride and smoke

	HMIS	NFPA	
Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	0	0	2-Moderate
PPE	B		3-Serious
			4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.

Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.

Prevent contact with skin or eyes (see section 8).

Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.**Methods for Cleaning up:** Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.**Materials not to be used for clean up:** Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.

Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.

Do not eat, drink or smoke while handling.

Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.

Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.

Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E

Engineering Controls: Use local exhaust as needed.**Monitoring:** Maintain breathing zone airborne concentrations below exposure limits.**Personal Protective Equipment (PPE):****Eye Protection:** Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.**Skin Protection:** Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.

Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.

With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.



GHS SAFETY DATA SHEET

WELD-ON® 717™ Low VOC Cements for PVC Plastic Pipe

Date Revised: JUN 2018

Supersedes: NOV 2017

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray or clear, heavy syrupy liquid	Odor Threshold:	0.88 ppm (Cyclohexanone)
Odor:	Ketone	Boiling Range:	66°C (151°F) to 156°C (313°F)
pH:	Not Applicable	Evaporation Rate:	> 1.0 (BUAC = 1)
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	Flammability:	Category 2
Boiling Point:	66°C (151°F) Based on first boiling component: THF	Flammability Limits:	LEL: 1.1% based on Cyclohexanone UEL: 11.8% based on THF
Flash Point:	-20°C (-4°F) TCC based on THF	Vapor Pressure:	129 mm Hg @ 20°C (68°F) based on THF
Specific Gravity:	0.963 @23°C (73°F)	Vapor Density:	>2 (Air = 1)
Solubility:	Solvent portion soluble in water. Resin portion separates out.	Other Data: Viscosity:	Heavy bodied
Partition Coefficient n-octanol/water:	Not Available		
Auto-ignition Temperature:	321°C (610°F) based on THF		
Decomposition Temperature:	Not Applicable		
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid:	Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials:	Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity:	LD50	LC50	Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	None Known
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.
Degradability:	Not readily biodegradable
Bioaccumulation:	Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:	Adhesives
Hazard Class:	3
Secondary Risk:	None
Identification Number:	UN 1133
Packing Group:	PG II
Label Required:	Class 3 Flammable Liquid
Marine Pollutant:	NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D".

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information:	Highly Flammable, Irritant, Carc. Cat. 2	Ingredient Listings:	USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
Symbols:	F, Xi		
Risk Phrases:	R11: Highly flammable. R20: Harmful by inhalation. R36/37: Irritating to eyes and respiratory system.	R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness	
Safety Phrases:	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes.	S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges. S46: If swallowed, seek medical advise immediately and show this container or label.	

SECTION 16 - OTHER INFORMATION

Specification Information:		
Department issuing data sheet:	IPS, Safety Health & Environmental Affairs	All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
E-mail address:	<EHSinfo@ipscorp.com>	
Training necessary:	Yes, training in practices and procedures contained in product literature.	
Reissue date / reason for reissue:	6/21/2018 / Updated GHS Standard Format	
Intended Use of Product:	Solvent Cement for PVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WELD-ON® 717™ Low VOC Cements for PVC Plastic Pipe
PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe
SUPPLIER: **MANUFACTURER:** IPS Corporation
 17109 South Main Street, Gardena, CA 90248-3127
 P.O. Box 379, Gardena, CA 90247-0379
 Tel. 1-310-898-3300
EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) **Medical:** CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health	Environmental	Physical
Acute Toxicity: Category 4 Skin Irritation: Category 3 Skin Sensitization: NO Eye: Category 2	Acute Toxicity: None Known Chronic Toxicity: None Known	Flammable Liquid Category 2

GHS LABEL:



Signal Word:
Danger

WHMIS CLASSIFICATION: CLASS B, DIVISION 2
CLASS D, DIVISION 1B

Hazard Statements

H225: Highly flammable liquid and vapor
 H319: Causes serious eye irritation
 H332: Harmful if inhaled
 H335: May cause respiratory irritation
 H336: May cause drowsiness or dizziness
 H351: Suspected of causing cancer
 EUH019: May form explosive peroxides

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
 P261: Avoid breathing dust/fume/gas/mist/vapors/spray
 P280: Wear protective gloves/protective clothing/eye protection/face protection
 P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P403+P233: Store in a well ventilated place. Keep container tightly closed
 P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH	CONCENTRATION
			Pre-registration Number	% by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	25 - 70
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	5 - 36
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	10 - 25

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
 * Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
 # indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.
Likely Routes of Exposure: Inhalation, Eye and Skin Contact
Acute symptoms and effects:
Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.
Chronic (long-term) effects: Category 2 Carcinogen

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon, hydrogen chloride and smoke

	HMS	NFPA	0-Minimal
Health	2	2	1-Slight
Flammability	3	3	2-Moderate
Reactivity	0	0	3-Serious
PPE	B		4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
 Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
 Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
 Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
 Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.
 Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
 Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA	CAL/OSHA	CAL/OSHA	CAL/OSHA
						PEL-Ceiling	PEL	Ceiling	STEL
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
 Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray or clear, heavy syrupy liquid	Odor Threshold:	0.88 ppm (Cyclohexanone)
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Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	Flammability:	Category 2
Boiling Point:	66°C (151°F) Based on first boiling component: THF	Flammability Limits:	LEL: 1.1% based on Cyclohexanone UEL: 11.8% based on THF
Flash Point:	-20°C (-4°F) TCC based on THF	Vapor Pressure:	129 mm Hg @ 20°C (68°F) based on THF
Specific Gravity:	0.963 @23°C (73°F)	Vapor Density:	>2 (Air = 1)
Solubility:	Solvent portion soluble in water. Resin portion separates out.	Other Data: Viscosity:	Heavy bodied
Partition Coefficient n-octanol/water:	Not Available	VOC Content: When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510 g/l.	
Auto-ignition Temperature:	321°C (610°F) based on THF		
Decomposition Temperature:	Not Applicable		

SECTION 10 - STABILITY AND REACTIVITY

Stability:	Stable
Hazardous decomposition products:	None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid:	Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials:	Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity:	LD ₅₀	LC ₅₀	Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
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Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	None Known
Mobility:	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.
Degradability:	Not readily biodegradable
Bioaccumulation:	Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name:	Adhesives
Hazard Class:	3
Secondary Risk:	None
Identification Number:	UN 1133
Packing Group:	PG II
Label Required:	Class 3 Flammable Liquid
Marine Pollutant:	NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D".

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

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Precautionary Label Information:	Highly Flammable, Irritant, Carc. Cat. 2	Ingredient Listings:	USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
Symbols:	F, Xi		
Risk Phrases:	R11: Highly flammable. R20: Harmful by inhalation. R36/37: Irritating to eyes and respiratory system.		R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness
Safety Phrases:	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes.		S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges. S46: If swallowed, seek medical advice immediately and show this container or label.

SECTION 16 - OTHER INFORMATION

Specification Information:		
Department issuing data sheet:	IPS, Safety Health & Environmental Affairs	All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
E-mail address:	<EHSinfo@ipscorp.com>	
Training necessary:	Yes, training in practices and procedures contained in product literature.	
Reissue date / reason for reissue:	6/21/2018 / Updated GHS Standard Format	
Intended Use of Product:	Solvent Cement for PVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.