G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME -----> Glycol Ether DM

PRODUCT NUMBER(S)-----> 170500

TRADE NAMES AND SYNONYMS----> Diethylene Glycol Monomethyl Ether 2-(2-methoxyethoxy)ethanol

CAS-No: 111-77-3 CHEMICAL FAMILY: Glycol Ether

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST RECOMMENDED USE: Manufacture of substances, Laboratory Chemicals. USES ADVISED AGAINST: No information available

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEETCompany:G.J. CHEMICAL CO., INC.Address:40 VERONICA AVENUE
SOMERSET, NJ 08873Telephone:1-973-589-1450Fax:1-973-589-3072

1.4 Emergency Telephone Number Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS) Flammable liquids (Category 4), H227 Reproductive toxicity (Category 2), H361

2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word: WARNING

Hazard statement(s) H227 Combustible liquid H361 Suspected of damaging fertility or the unborn child.

Precautionary statement(s)

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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.

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

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P403 + P235 Store in a well-ventilated place. Keep cool.

Storage:

P405 Store locked up.

Disposal:

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

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by Range	WT. CLASSIFICATION
2-(2-methoxyethoxy) EC-No Index-No.60 RegNo.01-211947510		 99.5+ 	 Flammable liquids (Category 4), H227 Reproductive toxicity (Category 2), H361
2-Methoxyethanol EC-No Index-No.60 Reg-No.01-211949472		 0.5 max. 	 Flammable liquids (Category 3), H226 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Acute toxicity, oral (Category 4), H302

| Reproductive toxicity (Category 1B), H360 | STOT-SE (Category 1), Immune system, | H370 | STOT-RE (Category 2), Thymus, H373

3.2 MIXTURE: Not applicable

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: Diethylene Glycol Methyl Ether **<u>FIRST AID- Remove from exposure area to fresh air</u> <u>immediately. If breathing has stopped, perform artificial respiration.</u> <u>Keep person warm and at rest. Treat symptomatically and</u> <u>supportively. Get medical attention immediately.</u>

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SKIN CONTACT: Diethylene Glycol Methyl Ether **<u>FIRST AID- Remove contaminated clothing and shoes</u> <u>immediately. Wash affected area with waterless cleaner first then</u> <u>soap and large amounts or water until no evidence of chemical</u> remains (approximately 15-20 minutes). Get medical attention

immediately.

EYE CONTACT: Diethylene Glycol Methyl Ether

**<u>FIRST AID- Wash eyes immediately with large amounts of</u> water, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Consult a physician if irritation persists.

INGESTION: Diethylene Glycol Methyl Ether

**<u>FIRST AID- Do not induce vomiting unless directed to do so by</u> medical personnel. Risk of damage to lungs exceeds poisoning risk. <u>Never give anything by mouth to an unconscious person. Have patient</u> <u>drink several glasses of water.</u> Consult a physician or poison control <u>center, treat symptomatically.</u> 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: Eye: Severe irritation, including tearing, redness and swelling;

<u>Skin</u>: May be harmful if absorbed through skin. May cause skin irritation <u>Inhalation</u>: May be harmful if inhaled. May cause respiratory tract irritation <u>Ingestion</u>: May cause gastrointestinal tract irritation.

Chronic: None known

<u>Medical Conditions Aggravated by Exposure</u>: Any pre-existing disorders of the eye.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Specific details on antidote: No recommendation given.

5. FIRE FIGHTING MEASURES

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL.

Flash Point: 87°C (189°F) TCCLEL %:1.38 (V)Auto-ignition Temp: Not DeterminedUEL %:22.7 (V)UNIFORM FIRE CODE: Combustible Liquid: III-A

5.1 <u>SUITABLE EXTINGUISHING MEDIA</u>: Foam--> x CO2--> x Dry Chemical--> x Water-fog--> x Other-->

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR

<u>MIXTURE</u>: Above the Flash Point explosive vapor/air mixtures may be formed.

<u>CONDITIONS OF FLAMMABILITY:</u> Flammable in the presence of a source of ignition when the temperature is above the flash point.

<u>HAZARDOUS COMBUSTION PRODUCTS:</u> Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 <u>ADVICE FOR FIREFIGHTERS</u>: Shut off source. Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind Do not spray pool fires directly. A solid stream of water or foam directed into hot burning liquid can cause frothing. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Cool containers with flooding amounts of water from as far a distance as possible. Wear NIOSH approved self-contained breathing apparatus for confined spaces. Use full firefighting protective clothing. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY

<u>PROCEDURES</u>: Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for cleanup and containment:

Use explosion proof equipment. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent such as clay or silica in spill area. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent. Remove contaminated soil to remove contaminated trace residues.

Methods for disposal:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Flush with water to remove trace reside. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations. Keep all nonessential people away.

6.4 <u>REFERENCE TO OTHER SECTIONS</u>: See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 <u>PRECAUTIONS FOR SAFE HANDLING:</u> Liquid evaporates and forms vapor (fumes), which can catch fire and burn. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid prolonged or repeated contact with eyes, skin and clothing. Do not take internally. Avoid breathing vapors in top of shipping components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers.

Advice on general occupational hygiene:

Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25°C. Store large quantities only in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not store with incompatible materials. Keep containers closed when not in use.

<u>CONTAINER WARNINGS</u>: Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

8.1 CONTROL PARAMETERS:

Ingredient	CAS No.	% by WT. Range	Exposure Limits
2 (2 mothoxyothoxy)	111-77-3	 99.5-100	 N.E.
2-(2-methoxyethoxy)	No.203-906-6	99.5-100	N.E.
	.603-107-00-6		
RegNo.01-2119475			
		i	
2-Methoxyethanol	109-86-4	0.5 max.	25ppm TWA (OSHA)
-	No.203-713-7	İ	0.1ppm TWA (ACGIH)
Index-No.603-011-00-4		İ	0.1ppm TWA (NIOSH)
Reg-No.01-2119494	4721-33-XXXX	i	
-		Ì	Ì
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Key: (PEL) = Permissible Exposure Limit OSHA (TLV) = Threshold Limit Value OSHA & ACGIH (STEL) = Short Term Exposure Limit ACGIH (WEEL) = USA. Workplace Environmental Exposure Levels (TWA) = Time Weighted Average CAS = Chemical Abstracts Registry Number IDLH = Immediate Danger to Life and Health N.E. =None Established

8.2 EXPOSURE CONTROLS

EXPOSURE GUIDELINES: Consider the potential hazards of this material (Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS: Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

<u>RESPIRATORY PROTECTION</u>: The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

For vapor concentrations 1 to 10 times OSHA TWA or PEL an air supplied NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times OSHA TWA or PEL and in confined areas use a approved positive pressure full face-piece supplied air respirator.

BODY CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance. Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

SKIN PROTECTION: Employee must wear appropriate protective gloves to prevent contact with this substance. Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Splash contact Material: Nitrile rubber Minimum layer thickness: 0.2 mm Break through time: 30 min

<u>HYGIENE</u>: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

<u>EYE/FACE PROTECTION</u>: Use safety eyewear with splash-guards or face shield. Emergency shower and eyewash should be easily accessible to the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Glycol Ether DM 111-77-3 **APPEARANCE:** Clear liquid Light yellow COLOR: Mild aromatic fruity odor ODOR: No data Available **ODOR THRESHOLD:** No data available pH: 120.15 amu **MOLECULAR WEIGHT: MELTING POINT:** -70°C (-94°F) 194°C (381°F) **BOILING POINT:** SPECIFIC GRAVITY: 1.025@20°C 1.023 g/ml @25°C DENSITY (25°C): VAPOR PRESSURE: 0.2 mm Hg @ 20°C (68.0°F) VAPOR DENSITY: 4.15 WATER SOLUBILITY: Complete log Pow: -0.469 at 20°C (68°F) PARTITION COEFFICIENT N-OCTANOL/WATER FLASH POINT: 87°C (189°F) - closed cup **EVAPORATION RATE (BUTYL ACETATE=1): 0.015** UPPER FLAMMABILITY LIMIT: 22.7% (V) LOWER FLAMMABILITY LIMIT: 1.38% (V) AUTO INGNITION TEMPERATURE: No data available No data available **DECOMPOSITION TEMPERATURE:** VISCOSITY: No data available **EXPLOSIVE PROPERTIES:** No data available **OXIDIZING PROPERTIES:** No data available

9.2 OTHER INFORMATION:

No data available

10. STABILITY AND REACTIVITY INFORMATION

- 10.1 <u>REACTIVITY</u>: No data available.
- 10.2 <u>CHEMICAL STABILITY</u>: Unstable () Stable (X)
- 10.3 POSSIBILITY OF HAZARDOUS REACTIONS: No data available

HAZARDOUS POLYMERIZATION: May occur () Will not occur (X)

- 10.4 <u>CONDITIONS TO AVOID</u>: Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. Do not distill to dryness.
- 10.5 <u>INCOMPATIBLE MATERIALS</u>: Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid hydrogen peroxide. Alkali metals, aluminum or zinc or their alloys.
- 10.6 <u>HAZARDOUS DECOMPOSITION PRODUCTS</u>: Fumes, Smoke, Carbon Monoxide, Aldehydes and other decomposition products where combustion is not complete. May form peroxides in the presence of air.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x Eye--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Eye> Severe irritation, including tearing, redness and swelling;

Skin> May be harmful if absorbed through skin. May cause skin irritation Inhalation> May be harmful if inhaled. May cause respiratory tract irritation

Ingestion> May cause gastrointestinal tract irritation.

Chronic: None known

Medical Conditions Aggravated by Exposure> Any pre-existing disorders of the eye.

ACUTE TOXICITY:

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient |Oral LD50 (Rat)|Skin LD50(Rabbit) |Inhalation LC50|

2-(2-Methoxy ethoxy)-ethanol	 >7000mg/kg 	20400mg/kg	 >2GM/M3 	
2-Methoxyethanol	 2.46g/kg 		 1500ppm 	

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: No skin irritation - 72 h

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: No eye irritation - 72 h

RESPIRATORY OR SKIN SENSITIZATION: Maximization Test (GPMT) - Guinea pig Result: Does not cause skin sensitization

MUTAGENIC EFFECTS: No data available

CARCINOGEN STATUS:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System): no data available

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): no data available

REPRODUCTIVE TOXICITY: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected human reproductive toxicant Possible risk of congenital malformation in the fetus

ASPIRATION HAZARD: No data available

ADDITIONAL DATA: No data available RTECS: KL6125000

12. ECOLOGICAL INFORMATION

12.1 AQUATIC TOXICITY:

This material is highly soluble in water. This material should exhibit low toxicity to aquatic organisms and to rats. The odor and flavor of this material may attract some wildlife and cause them to consume spilled product.

Toxicity to fish LC50 - Lepomis macrochirus (Bluegill) - 7,500 mg/l - 96 h LC50 - Pimephales promelas (fathead minnow) - 5,741 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 1,192 mg/l - 48 h

Toxicity to algae: EC50 - Selenastrum capricornutum (green algae) - > 1,000 mg/l - 96 h

12.2 <u>PERSISTANCE AND DEGRADABILITY</u>: This material should biodegrade after an acclimation period and is not expected to be environmentally persistent. Avoid accidental releases to aquatic or terrestrial systems.

12.3 <u>BIOACCUMULATIVE POTENTIAL</u>: This material is highly soluble in water and should not bio-accumulate in aquatic or terrestrial organisms. The noctanol/water coefficient is log Pow: -0.47 at 20 °C (68 °F).

Biological Oxygen Demand (BOD): No data available

Bio-concentration Factor (BCF): no data available

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB :

PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: No data available.

13. **DISPOSAL CONSIDERATIONS**

13.1 <u>WASTE TREATMENT METHODS:</u> Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment and or disposal methodologies for spent materials and residues at time of disposition. Incinerate under controlled conditions in a permitted facility.

<u>CONTAMINATED PACKAGING:</u> Dispose of as unused product.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

Land Transport (DOT) 14.1 USDOT ID Number> NA1993
14.2 USDOT Shipping Name> Combustible Liquid, n.o.s. (Diethylene Glycol Monomethyl Ether)
14.3 USDOT Hazard Classification> Combustible Liquid, n.o.s.
USDOT Label Codes> None
14.4 USDOT Package Code> III
14.5 Marine Pollutant> No
14.6 Special precautions for user> None
Emergency Response Guide> 128
Sea Transport (IMDG)
14.1 UN Number:> N/A
14.2 Proper Shipping Name> Not Dangerous Goods
14.3 Hazard Class:> N/A
USDOT Label Codes> N/A
14.4 Packing Group:> N/A
14.5 Marine Pollutant> No
Air Transport (IATA)
14.1 UN Number:> N/A
14.2 Proper Shipping Name:> Not Dangerous goods
14.3 Hazard Class:> N/A
USDOT Label Codes> N/A
14.4 Packing Group:> N/A
14.5 Environmental hazard> No

15. **REGULATORY INFORMATION**

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Listed 2-(2-Methoxyethoxy) ethanol CAS-No.111-77-3 SECTION 311/312: Hazard Categorization (40 CFR 370) - Chronic Health Hazard, Fire Hazard

<u>CERCLA (Comprehensive Environmental Response, Compensation, and Liability</u> <u>Act)</u> SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Not Listed

Reportable Quantity – None SECTION 101(14) Reportable Quantity: None

Massachusetts Right to Know Components 2-(2-Methoxyethoxy) ethanol CAS-No.111-77-3

Pennsylvania Right to Know Components 2-(2-Methoxyethoxy) ethanol CAS-No.111-77-3

New Jersey Right to Know Components 2-(2-Methoxyethoxy) ethanol CAS-No.111-77-3

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA (Toxic Substance Control Act) 2-(2-Methoxyethoxy) ethanol CAS-No.111-77-3 is listed on the TSCA Inventory.

International Inventories:				
<u>Country or Region</u>	Inventory Name	On inventory y	<u>/es/no</u>	
<u>Australia</u>	Australian Inventory of Chemical Substances	s (AICS)	Yes	
<u>Canada</u>	Domestic Substances List (DSL)		Yes	
<u>Canada</u>	Non-Domestic Substances List (NDSL)		No	
<u>China</u> Europo	Inventory of Existing Chemical Substances in European Inventory of Existing Commercial () res Yes	
<u>Europe</u>	Substances (EINECS)	Chemicals	Tes	
<u>Europe</u> Japan Japan	European List of Notified Chemical Substance Inventory of Existing and New Chemical Sub Industrial Safety & Health Law Inventory (ISH	stances (ENCS	No) Yes Yes	

<u>Korea</u>	Existing Chemicals List (ECL)	Yes
Mexico	National Inventory of Chemical Substances (INSQ)	Yes
New Zealand	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Switzerland	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
United States &	Toxic Substances Control Act Inventory	Yes
Puerto Rico		

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.

16. OTHER INFORMATION:

HMIS (Hazardous Materials Identification System) **Hazard Rating:**

4-Extreme 3-High 2-Moderate 1-Slight 0-Insignificant

NFPA RATINGS (SCALE 0-4):	Health=1	Fire=1	Reactivity=0
HMIS RATINGS (SCALE 0-4):	Health=1	Fire=2	Reactivity=0 PPE=G

Hazard statement(s) from Section 2 and 3:

H227 Combustible liquid

H361 Suspected of damaging fertility or the unborn child.

Date of preparation-----> April 25, 2002 Revision Number-----> 1.7 Revision Content-----> Updated Sections: 4, 10, 11, and 16 Revision Date-----> May 7, 2019 Prepared by-----> T.G. Fenstermaker Jr.

Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygenists
AIHA	-	American Industrial Hygiene Association
ANSI	-	American Nation Standards Institute
API	-	American Petroleum Institute
CERCLA	۹ -	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	-	U.S. Department of Transportation
EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer
MSHA	-	Mine Safety and Health Administration
NFPA	-	National Fire Protection Association
NIOSH	-	National Institute of Occupational Safety and Health
NOIC	-	Notice of Intended Change (Proposed change to ACGIH TLV)
NTP	-	National Toxicology Program
OPA	-	Oil Pollution Act of 1990
OSHA	-	U.S. Occupational Safety & Health Administration
PEL	-	Permissible Exposure Limit (OSHA)

RCRA	-	Resource Conservation and Recovery Act
REL	-	Recommended Exposure Limit (NIOSH)
SARA	-	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	-	Self-Contained Breathing Apparatus
STEL	-	Short-Term Exposure Limit (generally 15 minutes)
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8hr.)
WHMIS	-	Canadian Workplace Hazardous Materials Information System

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