

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

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME -----> **Glycol Ether EB**

PRODUCT NUMBER(S)-----> 171100

TRADE NAMES AND SYNONYMS -> Ethylene Glycol Monobutyl Ether, 2-
Butoxyethanol

CAS-No: 111-76-2

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 SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE
SOMERSET, NJ 08873**

Telephone: **1-973-589-1450**

Fax: **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

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

2.2 GHS Label elements, including precautionary statements



Pictogram

GHS07

Signal word: **WARNING**

Hazard statement(s)

H227 Combustible liquid

H302 + H312 +H332 Harmful if swallowed or in contact with skin or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statement(s)

Prevention:

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

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

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

P271 Use only outdoors or in a well-ventilated area.

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

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

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

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

P362 Take off contaminated clothing and wash before reuse.

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

Storage:

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

Disposal:

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

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS Rapidly absorbed through skin.

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by WT. Range	CLASSIFICATION
Ethylene Glycol	111-76-2	99.0	Flammable liquids (Category 4), H227
Monobutyl Ether EC-No. 203-905-0			Acute toxicity, Oral (Category 4), H302
Index-No. 603-014-00-0			Acute toxicity, Inhalation (Category 4), H332
Reg-No. 01-2119475108-36-XXXX			Acute toxicity, Dermal (Category 4), H312
			Skin irritation (Category 2), H315
			Eye irritation (Category 2A), H319

3.2 MIXTURE: Not applicable

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: Ethylene Glycol Butyl Ether

****FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.**

SKIN CONTACT: Ethylene Glycol Butyl Ether

****FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with waterless cleaner first then soap and large amounts or water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

EYE CONTACT: Ethylene Glycol Butyl Ether

****FIRST AID- Wash eyes immediately with large amounts of 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: Ethylene Glycol Butyl Ether

****FIRST AID- Do not induce vomiting unless directed to do so by medical personnel. Risk of damage to lungs exceeds poisoning risk. Never give anything by mouth to an unconscious person. Have patient drink several glasses of water. Consult a physician or poison control center, treat symptomatically.**

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED INGESTION:

Eye: Moderate irritation, including tearing, redness and swelling; Corneal injury is unlikely.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation

Ingestion: Low Toxicity if swallowed. Small amounts swallowed as a result of normal handling operations are not likely to cause injury. Swallowing large amounts may cause injury.

Chronic: In animals, effects have been reported on the blood. May cause central nervous system effects.

Medical Conditions Aggravated by Exposure: Any pre-existing disorders of the liver and kidney.

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

Specific details on antidote: No recommendation given.

5. FIRE FIGHTING MEASURES

Flash Point: 67°C (153°F) TCC

LEL %:1.1 (V)

Auto-ignition Temp: 230°C (446°F)

UEL %:12.7 (V)

UNIFORM FIRE CODE: Combustible Liquid: III-A

5.1 SUITABLE EXTINGUISHING MEDIA: Foam--> x CO2--> x Dry Chemical--> x Water-fog--> x Other--> Alcohol resistant Foams (ATC Type) are preferred

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR

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

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

HAZARDOUS COMBUSTION PRODUCTS: 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 ADVICE FOR FIREFIGHTERS: 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 fire-fighting 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 PROCEDURES: 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 residue. 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 REFERENCE TO OTHER SECTIONS: See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: 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

contact with eyes, skin and clothing. Do not take internally. Avoid breathing vapors in top of shipping container. Avoid work practices that may release volatile 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. Recommended storage temperature: 15 - 25°C. Local permits are required for storage in warehouse quantities. 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.

CONTAINER WARNINGS: 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 re-conditioner.

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
Ethylene Glycol	111-76-2	99.0-100	20ppm TWA (ACGIH)
Monobutyl Ether EC-No. 203-905-0	Index-No. 603-014-00-0		5ppm TWA (NIOSH)
Reg-No. 01-2119475108-36-XXXX			25ppm TWA (OSHA)

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.

RESPIRATORY PROTECTION: 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 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: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 30 min

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

EYE/FACE PROTECTION: 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:

Ethylene Glycol Monobutyl ether 111-76-2

APPEARANCE:	Clear liquid
COLOR:	Colorless
ODOR:	Mild odor
pH:	No data available
MOLECULAR WEIGHT:	118.17 amu
MELTING POINT:	-75°C (-103°F)
BOILING POINT:	169 - 172.5°C (336 - 342.5°F)
SPECIFIC GRAVITY:	0.902@25°C
DENSITY (25°C):	0,902 g/ml @25°C
VAPOR PRESSURE:	<1 mm Hg @ 20°C (68.0°F) 10 mmHg@ 81°C (178°F)
VAPOR DENSITY:	4.08
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT N-OCTANOL/WATER	log Pow: 0.81@ 25°C (77°F)
FLASH POINT:	67°C (153°F) - closed cup
EVAPORATION RATE (BUTYL ACETATE=1):	No data available
UPPER FLAMMABILITY LIMIT:	12.7% (V)
LOWER FLAMMABILITY LIMIT:	1.1% (V)
AUTO IGNITION TEMPERATURE:	230°C (446°F)
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	4.5mPa.s@25°C (77°F)
EXPLOSIVE PROPERTIES:	No data available
OXIDIZING PROPERTIES:	No data available

9.2 OTHER INFORMATION:

Surface tension 65.03 mN/m at 20 °C (68 °F)

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY: No data available.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: No data available

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

10.4 CONDITIONS TO AVOID: Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. Do not distill to dryness.

10.5 INCOMPATIBLE MATERIALS: 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 HAZARDOUS DECOMPOSITION PRODUCTS: Fumes, Smoke, Carbon Monoxide, Carbon Dioxide, Aldehydes, Ketones, Organic acids.

Generation of gas during decomposition can cause pressure in closed systems.

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> Moderate irritation, including tearing, redness and swelling; Corneal injury is unlikely.

Skin> May be harmful if absorbed through skin. May cause skin irritation.

Inhalation> May be harmful if inhaled. May cause respiratory tract irritation

Ingestion> Low Toxicity if swallowed. Small amounts swallowed as a result of normal handling operations are not likely to cause injury. Swallowing large amounts may cause injury.

Chronic: In animals, effects have been reported on the blood. May cause central nervous system effects.

Medical Conditions Aggravated by Exposure> Any pre-existing disorders of the liver and kidney.

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|

Ingredient	Oral LD50(Rat)	Skin LD50(Rabbit)	Inhalation LC50
Ethylene Glycol Monobutyl Ether	470mg/kg	220mg/kg	450ppm/4hr

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Skin irritation - 20 h

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Eye irritation - 24 h (OECD Test Guideline 405)

RESPIRATORY OR SKIN SENSITIZATION: Maximization Test - Guinea pig Result:

Does not cause skin sensitization. (OECD Test Guideline 406)

MUTAGENIC EFFECTS: Hamster ovary Result: negative OECD Test Guideline 474

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.

REPRODUCTIVE TOXICITY: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

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

ASPIRATION HAZARD: No data available

11.2 ADDITIONAL DATA: Human exposure above 200 ppm can be expected to cause narcosis, damage to the kidney and liver and present an abnormal blood picture showing erythropenia, reticulocytosis, granulocytosis, leukocytosis, and would be likely to cause fragility of erythrocytes and hematuria. Swallowing of 2-butoxyethanol results in a sour taste that turns to a burning sensation and is followed by numbness of the tongue which indicates paralysis of the sensory nerve endings., Central nervous system depression, Headache, narcosis
RTECS: KJ8575000

12. ECOLOGICAL INFORMATION

12.1 AQUATIC TOXICITY (Acute):

Toxicity to fish:

LC50 - Oncorhynchus mykiss (rainbow trout) - 1,474 mg/l - 96 h, Static Test (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 1,550 mg/l - 48 h, Immobilization Test (OECD Test Guideline 202)

Toxicity to algae:

EC50 - Pseudokirchneriella subcapitata (green algae) - 1,840 mg/l - 72 h (OECD Test Guideline 201)

12.2 PERSISTENCE AND DEGRADABILITY: Aerobic - Exposure time 28 d Result: 90.4 % - Readily biodegradable. (OECD Test Guideline 301B)

12.3 BIOACCUMULATIVE POTENTIAL: This material is highly soluble in water and should not bio-accumulate in aquatic or terrestrial organisms. The measured octanol/water(log Pow) partition coefficient 0.83

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 WASTE TREATMENT METHODS: 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.

CONTAMINATED PACKAGING: 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. (2-
Butoxyethanol)**

**USDOT Non-Bulk Shipping Name-----> Combustible liquid, n.o.s. (2-
Butoxyethanol)**

14.3 USDOT Hazard Classification-----> CBL

USDOT Label Codes----->

14.4 USDOT Package Code-----> III

14.5 Environmental hazard-----> None

14.6 Special precautions for user-----> No

Emergency Response Guide-----> 128

Sea Transport (IMDG)

14.1 ID Number-----> N/A

14.2 Proper shipping name-----> Not Hazardous Goods

14.3 Hazard Classification-----> N/A

Label Codes-----> N/A

14.4 Package Code-----> N/A

14.5 Environmental hazard-----> None

14.6 Special precautions for user-----> N/A

EMS-Number-----> N/A

Air Transport (IATA)

14.1 ID Number-----> N/A

14.2 Proper shipping name-----> Not Hazardous Goods

14.3 Hazard Classification-----> N/A

Label Codes-----> N/A

14.4 Package Code-----> N/A

14.5 Environmental hazard-----> None

14.6 Special precautions for user-----> None

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-Butoxyethanol
CAS111-76-2 99.0-100%**

**SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard,
Chronic Health Hazard, Fire Hazard**

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Not Listed

Reportable Quantity – None

SECTION 101(14) Reportable Quantity: None

OSHA Hazard Communication Standard:

**This product is a “Hazardous Chemical” as defined by the OSHA Hazard
Communication Standard 29.CFR 1910.1200**

Massachusetts Right to Know Components

2-Butoxyethanol CAS-No.111-76-2

Pennsylvania Right to Know Components

2-Butoxyethanol CAS-No.111-76-2

New Jersey Right to Know Components

2-Butoxyethanol CAS-No.111-76-2

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-Butoxyethanol CAS-No.111-76-2 is listed on the TSCA Inventory.****International Inventories:**

<u>Country or Region</u>	<u>Inventory Name</u>	<u>On inventory yes/no</u>
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No
<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes
<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes
<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has not 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=2 Fire=2 Reactivity=0
HMIS RATINGS (SCALE 0-4): Health=2 Fire=2 Reactivity=0 PPE=G

Hazard statement(s) from Section 2 and 3:**H227 Combustible liquid****H302 + H312 +H332 Harmful if swallowed or in contact with skin or if inhaled.****H315 Causes skin irritation.****H319 Causes serious eye irritation.**

Date of preparation-----> November 27, 2013
Revision Number-----> 1.3
Revision Content-----> Corrected Section 3
Revision Date-----> August 13, 2018
Prepared by-----> T.G. Fenstermaker Jr.

Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygienists
AIHA	-	American Industrial Hygiene Association
ANSI	-	American Nation Standards Institute
API	-	American Petroleum Institute
CERCLA	-	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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