

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

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME-----> **Diethylene Glycol**

PRODUCT NUMBER(S)-----> 136400

TRADE NAMES AND SYNONYMS--> Ethanol, 2,2 -oxybis, DEG, Diglycol,
2,2' - oxydiethanol 111-46-6; 2-Hydroxyethyl ether

CAS-No: 111-46-6

CHEMICAL FAMILY: Glycols, Diols

1.2 RELAVENT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES

ADVISED AGAINST: Industrial: Use in paper and board dye, Use in cleaning chemicals, Use in paints/coatings, Use in lubricants, Use as a process chemical, Production of polymers-coatings-foam, Use in metal working fluids, Use in water treatment chemicals, Use in functional fluids, Use as an intermediate, 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)

Acute toxicity, Oral (Category 4), H302

Specific target organ toxicity - repeated exposure, Oral (Category 2), Kidney, H373

2.2 GHS Label elements, including precautionary statements



Pictogram

GHS07 GHS08

Signal word **WARNING**

Hazard statement(s)

H302 Harmful if swallowed.

H316 Causes mild skin irritation

H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary statement(s)

Prevention:

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

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

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P314 Get medical advice/ attention if you feel unwell.

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 known.

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by WT. Range	CLASSIFICATION
Diethylene Glycol	111-46-6 EC-No.203-872-2 Index No. 603-140-00-6 Reg.-No. 01-2119457857-21-XXXX	99	Acute toxicity, Oral (Category 4), H302 STOT-RE (Category 2), Oral, Kidney. H373
Ethylene Glycol	107-21-1 EC.No.203-473-3 Index No.603-027-00-1 Reg.-No. 01-2119456816-28-XXXX	0-.5	Acute toxicity, Oral (Category 4), H302 STOT-RE (Category 2), Oral, Kidney, H373

Triethylene Glycol	112-27-6	0-.5	Not a hazardous substance
	EC-No. 203-953-2		
	Reg.-No. 01-2119438366-35-XXXX		

3.2 MIXTURE: Not Applicable

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: Diethylene Glycol

****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: Diethylene Glycol

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

EYE CONTACT: Diethylene Glycol

****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: Diethylene Glycol

****FIRST AID- Do not induce vomiting. 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:

Eye: Mildly irritating; reddening of the conjunctiva;

Skin: Mildly irritating;

Inhalation: Low vapor pressure at ambient temperature indicating that it has limited inhalation hazard. Vapor formed by heating the material may cause respiratory tract irritation.

Ingestion: If consumed in sufficient quantity (0.5-5.0g/kg) may produce lethal response. May cause gastrointestinal distress, pain in lumbar region, nausea, vomiting, dizziness drowsiness, decreased urine production, malaise, loss of consciousness, kidney and liver damage.

Chronic: Typical symptoms are cardiovascular disorders, sweetish taste in the mouth, nausea, vomiting, loss of appetite, strong thirst, burning of eyes and bleeding from the nose. Damage may occur to the kidney or liver.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing skin, central nervous system or impaired kidney or liver function should avoid contact with this material.

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: 143°C (289.4°F) CC

LEL %:0.7 (V)

Auto-ignition Temp: 372°C (702°F)

UEL %:22 (V)

UNIFORM FIRE CODE: Combustible Liquid: III-B

5.1 EXTINGUISHING MEDIA:

Co-ordinate fire-fighting measures to the fire surroundings.

Suitable extinguishing media: 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 MIXTURE:

Combustible; Diethylene Glycol mist in air is a moderate fire and explosion hazard. Keep containers tightly closed.

Sensitivity to Mechanical Impact: No

Sensitivity to Static Discharge: No

HAZARDOUS COMBUSTION PRODUCTS: In case of fire may be liberated:
Carbon monoxide, carbon dioxide.

5.3 ADVICE FOR FIREFIGHTERS: Avoid inhalation of fumes or vapors. 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/MSHA approved self-contained breathing apparatus (SCBA) 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: Immediately evacuate all nonessential people. Avoid contact with skin and inhalation of its vapors. Wear appropriate gloves to prevent skin exposure. Eliminate ignition sources in the vicinity of the spill or released vapor. 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, avoid release to the environment.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for cleanup and containment:

Shut off valves, contain spill, dike area to contain spill, recover liquid for reuse or reclamation. For small spills add non-flammable absorbent such as clay or silica in spill area. For large spills dike and recover or use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Prevent runoff from entering drains. Remove contaminated soil to remove contaminated trace residues.

Methods for disposal:

Collect and 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 Section 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: Liquid quickly 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 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. Local permits are required for storage in warehouse quantities. Recommended storage temperature 15°C to 25°C. Store large quantities only in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Keep containers closed when not in use.

Incompatible substances or mixtures: Do not contact with oxidizing materials.

Hygroscopic; Storage class (TRGS 510): 10: Combustible liquids

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
Diethylene Glycol	111-46-6 EC-No.203-872-2 Index No. 603-140-00-6 Reg.-No. 01-2119457857-21-XXXX	99-100	10ppm TWA (WEEL)

Ethylene Glycol	107-21-1	0-.5	50ppm TLV (ACGIH)
	EC.No.203-473-3		50ppm PEL (OSHA)
	Index No.603-027-00-1		
	Reg.-No. 01-2119456816-28-XXXX		
Triethylene Glycol	112-27-6	0-.5	N.E.
	EC-No. 203-953-2		
	Reg.-No. 01-2119438366-35-XXXX		

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

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 WEEL an air supplied NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times WEEL and in confined areas use a NIOSH/ MSHA approved positive pressure full face-piece supplied air respirator (SCBA).

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.

Gloves:

Type of material: Nitrile rubber

Material thickness: >0.11 mm

Breakthrough times of the glove material: >480 minutes.

Preventive skin protection (barrier creams/ointments) is recommended.

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. 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

2,2' – oxydiethanol 111-46-6

APPEARANCE:	Clear slightly viscous liquid
COLOR:	Colorless
ODOR:	No data available.
ODOR THRESHOLD:	No Data Available
pH:	5 - 8 at 500 g/l at 20 °C (68 °F)
MOLECULAR WEIGHT:	106.12 amu
MELTING POINT:	-10 °C (14 °F)
BOILING POINT:	245 °C (473 °F)
SPECIFIC GRAVITY:	1.118@25°C
DENSITY (25°C):	1.118 g/ml @25°C
VAPOR PRESSURE:	0.006 mm Hg @ 25°C (77.0°F)
VAPOR DENSITY:	3.66
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT N-OCTANOL/WATER	log Pow: -2.0
FLASH POINT:	143 °C (289 °F) - closed cup
EVAPORATION RATE (BUTYL ACETATE=1):	<0.001
UPPER FLAMMABILITY LIMIT:	12.3% (V)
LOWER FLAMMABILITY LIMIT:	2.0% (V)
AUTO IGNITION TEMPERATURE:	372°C (702°F)
DECOMPOSITION TEMPERATURE:	No data available
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 REACTIVITY: Exothermic reaction with strong oxidizer.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)

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

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: Vapors may form flammable mixtures with air.

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

10.4 CONDITIONS TO AVOID: Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. At elevated temperatures explosive decomposition may occur.

10.5 INCOMPATIBLE MATERIALS: Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid hydrogen peroxide. Zinc

10.6 HAZARDOUS DECOMPOSITION PRODUCTS: Fumes, Smoke, Carbon Monoxide, Carbon Dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

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

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Eye> Mildly irritating; reddening of the conjunctiva;

Skin> Mildly irritating;

Inhalation>Low vapor pressure at ambient temperature indicating that it has limited inhalation hazard. Vapor formed by heating the material may cause respiratory tract irritation.

Ingestion> If consumed in sufficient quantity (0.5-5.0g/kg) may produce lethal response. May cause gastrointestinal distress, pain in lumbar region, nausea, vomiting, dizziness drowsiness, decreased urine production, malaise, loss of consciousness, kidney and liver damage.

Chronic: Typical symptoms are cardiovascular disorders, sweetish taste in the mouth, nausea, vomiting, loss of appetite, strong thirst, burning of eyes and bleeding from the nose. Damage may occur to the kidney or liver.

Medical Conditions Aggravated by Exposure> Individuals with pre-existing skin, central nervous system or impaired kidney or liver function should avoid contact with this material.

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
Diethylene Glycol	1000mg/kg	11890mg/kg	4.4mg/L3/4hr
Ethylene Glycol	4700mg/kg	10600mg/kg	1460ppm/4hr
Triethylene Glycol	17000mg/kg	>22500mg/kg	N.D.

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

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

RESPIRATORY OR SKIN SENSITIZATION: No information available.

Respiratory: Based on available data, the classification criteria are not met

Skin: Based on available data, the classification criteria are not met

Maximization Test - Guinea pig Result: Did not cause sensitization on laboratory animals. (OECD Test Guideline 406)

MUTAGENIC EFFECTS: Ames test Escherichia coli/Salmonella typhimurium

Result: negative (OECD Test Guideline 474) Mouse - male - Bone marrow Result: negative

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 identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: No data available.

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) May cause damage to organs through prolonged or repeated exposure. Oral - Kidney

11.2 ADDITIONAL DATA: Symptoms and signs of poisoning are: Confusion, Dizziness, Kidney injury may occur., Unconsciousness, Convulsions, Nausea, Headache, Vomiting, Pulmonary edema. Effects may be delayed.

Repeated dose toxicity Rat - Oral - NOAEL: 100 mg/kg

RTECS: ID5950000

12. ECOLOGICAL INFORMATION

12.1 ACUTE AQUATIC TOXICITY:

Toxicity to Fish:

LC50 *Gambusia affinis* (Mosquitofish) >32,000 mg/L 96 h

Toxicity to aquatic invertebrates:

LC50 *Daphnia Magna* (Water flea) >10,000 mg/L 24 h

Toxicity to algae:

EC50 *Scenedesmus quadricauda* (Green algae) 2700 mg/L 7 d

Toxicity to bacteria:

EC20 Activated sludge >1995mg/L – 0.5 h static test

12.2 PERSISTANCE AND DEGRADABILITY:

anaerobic - Exposure time 28 d

Result: >90% - Readily biodegradable.

(OECD Test Guideline 301A)

Biological Oxygen Demand (BOD): BOD 28-day 50-60% theoretical BOD

12.3 BIOACCUMULATIVE POTENTIAL:

Octanol/Water Partition Coefficient: log Pow: -2.0

Bio-concentration Factor (BCF): 100

Does not significantly accumulate in organisms.

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: Slightly hazardous to water.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:

Diethylene Glycol is a non hazardous solid waste as defined by RCRA (40CFR261). Dispose in accordance with all applicable disposal regulations. Recover for reuse or reclamation.

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-----> N/A
- 14.2 USDOT Shipping Name-----> Not DOT Regulated
Not Dangerous Goods
- 14.3 USDOT Hazard Classification-----> N/A
USDOT Label Codes-----> N/A
- 14.4 USDOT Package Code-----> N/A
- 14.5 Environmental hazard-----> No
- 14.6 Special precautions for user-----> None

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 Environmental hazard-----> 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 Ethylene Glycol CAS 107-21-1 <0.5%

SECTION 311/312: Hazard Categorization (40 CFR 370) - None

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

Massachusetts Right to Know Components

Ethylene glycol CAS 107-21-1

Pennsylvania Right to Know Components

Diethylene glycol CAS-No.111-46-6

Ethylene glycol CAS 107-21-1

New Jersey Right to Know Components

Diethylene glycol CAS-No.111-46-6

Ethylene glycol CAS 107-21-1

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)

Diethylene Glycol CAS 111-46-6, Ethylene Glycol CAS-No. 107-21-1, Triethylene Glycol CAS-No.112-27-6 are 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 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=1 Reactivity=0

Text of hazard statement codes in Section 2 and 3

H302 Harmful if swallowed.

H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Date of preparation-----> February 24, 2005

Revision Number-----> 1.7

Revision Content-----> General update all sections

Revision Date-----> January17, 2019

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

This information is furnished without warranty, representation, inducement of license of any kind, except that it is accurate to the best of G.J. Chemical's knowledge, or obtained from sources believed by G.J. Chemical Co., Inc. to be accurate, and G.J. Chemical Co., Inc. does not assume any legal responsibility for use or reliance upon same. Users are encouraged to conduct their own tests. Before using any product, read its label. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.