

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

## 1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME-----> **PROPYLENE GLYCOL (ALL GRADES)**

PRODUCT NUMBER(S)-----> 239300, 239340 and 239350

TRADE NAMES AND SYNONYMS ---> 1,2-Propanediol, 1,2-Dihydroxypropane,  
Propane -1,2 diol

CAS-No: 57-55-6

CHEMICAL FAMILY: Glycols, Diols

1.2 Relevant identified uses of the substance or mixture and uses advised against  
**IDENTIFIED USES:** Industrial: Mining chemicals, Water treatment chemicals, Use  
in cleaning agents, Functional fluids, Polymer production, Textile application,  
Rubber production and processing, Use in coatings, Use in paper, Use in heat  
transfer fluids, 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)**  
Not a hazardous substance or mixture.

### 2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

Pictogram none

Signal word: none

Hazard statement(s)  
Not a hazardous substance or mixture.

Precautionary statement(s)  
Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

### 3. INGREDIENTS

#### 3.1 SUBSTANCE:

Ingredient	CAS No.	% by WT. Range	CLASSIFICATION
Propylene Glycol	57-55-6 EC-No.200-338-0 Reg.-No. 01-2119456809-23-XXXX	99.5	Not a hazardous substance or mixture.

32. MIXTURE: Not applicable.

### 4. FIRST-AID MEASURES

#### 4.1 DESCRIPTION OF FIRST AID MEASURES:

**INHALATION: Propylene Glycol**  
**Remove from exposure to fresh air. Keep warm and quiet. Notify physician.**

**EYES (SPLASH): Propylene Glycol**  
**Flush eyes with water for 15 minutes, retract eyelids often to irrigate.**  
**Remove contact lenses, if present, after first flush. Obtain medical attention if pain, tears or redness persist.**

**SKIN (SPLASH): Propylene Glycol**

**Wash affected area with soap and water. Remove contaminated clothing.**

**INGESTION: Propylene Glycol**

**If large amounts are swallowed, consult a physician. Drink several glasses of water to dilute. Exposed persons with previous kidney dysfunction may require special treatment.**

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

Eye> Vapors and mists are mildly irritating; Symptoms tearing, irritation, stinging.

Skin> Mildly irritating; Symptoms de-fatting of skin and irritation.

Inhalation> If heated or sprayed concentrations may be attained that are sufficient to cause irritation to the upper respiratory tract.

Ingestion> If more than several mouthfuls are swallowed, abdominal discomfort, nausea, and diarrhea may occur.

Chronic: May aggravate individuals with pre-existing kidney disease.

Medical Conditions Aggravated by Exposure> May aggravate pre-existing eye and kidney disease.

**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: 103°C (217°F)

LEL %:2.6(V)

AUTO-IGNITION TEMP: 415°C (779°F)

UEL %:12.5(V)

UNIFORM FIRE CODE: Combustible Liquid Class IIIB

**5.1 SUITABLE EXTINGUISHING MEDIA:** Foam--> x CO2--> x Dry Chemical--> x Water-fog-->x Other-->

Unsuitable extinguishing media: Do not use waterjet. May spread fire.

**5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:**

Heat from fire can generate flammable vapor. This vapor mixed with air and exposed to ignition source can burn in open or explode if confined.

**CONDITIONS OF FLAMMABILITY:** Not flammable or combustible.

**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:** Special Fire Fighting Procedures: Shut off source. Water fog may be used to cool closed containers to prevent pressure build up. Aqueous solutions of Propylene Glycol greater than 22% by wt., if heated sufficiently, will produce flammable vapors. Aqueous solutions containing less than 95% by wt. Propylene Glycol have no flash point by standard methods. Wear NIOSH/MSHA approved self-contained breathing apparatus (SCBA) for confined spaces and where there is exposure to hot vapors. Use full fire-fighting protective clothing.

## **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 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, for small 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.

Methods for disposal:

Remove contaminated soil to remove contaminated trace residues. 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:** Do not take internally. Avoid prolonged or repeated contact with skin, eyes, and clothing. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. 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.

**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. 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. Store in the following material(s): Stainless steel. Aluminum. Container lined with phenolic or epoxy-phenolic FDA food contact approved coating. 316 stainless steel. Opaque HDPE plastic container. 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
Propylene Glycol	57-55-6 EC-No.200-338-0 Reg.-No. 01-2119456809-23-XXXX	99.5	10mg/m3 TWA (WEEL)

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) TWA use an air purifying NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times (WEEL) TWA, in confined areas, and/or where vapor concentrations are unknown 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:**

**Full contact Material:** Nitrile rubber

**Minimum layer thickness:** 0.11 mm

**Break through time:** 480 min

**Splash contact Material:** Nitrile rubber

**Minimum layer thickness:** 0.11 mm

**Break through time:** 480 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.

Contact lenses should not be worn.

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:

Propylene Glycol 57-55-6

Appearance-----> Clear oily liquid  
Color-----> Colorless  
Odor-----> Little or No odor  
Odor Threshold-----> No data available  
pH-----> No data available  
Molecular Weight-----> 76.09amu  
Melting/Freezing Point-----> -60°C (-76°F)  
Boiling Range -----> 187°C (369°F)  
Specific Gravity-----> 1.036 @25°C (77°F)  
Vapor Pressure-----> 0.08 mmHg@20°C (68°F)  
Vapor Density (air=1)-----> 2.63  
Water Solubility-----> Soluble  
Partition Coefficient n-Octanol/Water-> Log Pow: -0.8 @25°C (77°F)  
Evaporation Rate (Butyl Acetate=1)----> 0.01  
Flash Point-----> 103°C (217°F) - closed cup  
Upper Flammability Limit-----> 12.5% (V)  
Lower Flammability Limit-----> 2.6% (V)  
Auto-Ignition Temperature-----> 415°C (779°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: No data available.

10.2 CHEMICAL STABILITY: Unstable ( ) Stable (X)  
Stable under recommended storage conditions

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. At elevated temperatures flammable vapors will form.

10.5 INCOMPATIBLE MATERIALS: Acid chlorides, Acid anhydrides, Oxidizing agents, Chloroformates, Reducing agents

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, aldehydes.**

**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> Vapors and mists are mildly irritating; Symptoms tearing, irritation, stinging.

Skin> Mildly irritating; Symptoms de-fatting of skin and irritation.

Inhalation> If heated or sprayed concentrations may be attained that are sufficient to cause irritation to the upper respiratory tract.

Ingestion> If more than several mouthfuls are swallowed, abdominal discomfort, nausea, and diarrhea may occur.

Chronic: May aggravate individuals with pre-existing kidney disease.

Medical Conditions Aggravated by Exposure> May aggravate pre-existing eye and kidney disease.

**ACUTE TOXICITY:**

The effects of overexposure shown under Acute Health Effects are based on acute toxicity profiles. Typical values are:

Ingredient	Oral LD50 (Rat)	Skin LD50 (Rabbit)	Inhalation LC50	
Propylene Glycol	>20000mg/kg	>20800mg/kg	N.D.	

**Other information on acute toxicity:**

LD50 Intramuscular - rat - 14 g/kg

LD50 Intravenous - dog - 26 g/kg

LD50 Intraperitoneal - rat - 6,660 mg/kg

LD50 Subcutaneous - rat - 22,500 mg/kg

LD50 Intravenous - rat - 6,423 mg/kg



**LD50 Intraperitoneal - mouse - 9,718 mg/kg -**

**Remarks: Lungs, Thorax, or Respiration: Chronic pulmonary edema. Kidney, Ureter, Bladder: Changes in both tubules and glomeruli. Blood: Changes in spleen.**

**Skin corrosion/irritation Skin: Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)**

**Serious eye damage/eye irritation Eyes: Rabbit Result: Mild eye irritation**

**Respiratory or skin sensitization: No data available**

**MUTAGENIC EFFECTS: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were 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): In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.**

**ASPIRATION HAZARD: No data available**

**11.2 ADDITIONAL DATA: No data available**

**RTECS: TY2000000**

## **12. ECOLOGICAL INFORMATION**

### **12.1 AQUATIC TOXICITY (Acute):**

**Toxicity to fish:**

**Mortality NOEC - Pimephales promelas (fathead minnow) - 52,930 mg/l - 96 h**

**Toxicity to daphnia and other aquatic invertebrates:**

**Mortality NOEC - Daphnia - 13,020 mg/l - 48 h**

**EC50 - Daphnia magna (Water flea) - > 10,000 mg/l - 48 h**

**12.2 PERSISTENCE AND DEGRADABILITY:** Propylene Glycol is reported to be readily biodegradable; greater than or equal to 81% degradation over a test period of 28 days. Method: (OECD Test Guideline 301F) or Equivalent Biological Oxygen Demand (BOD): Incubation Time BOD 5 d: 69.000%, 10 d: 70.000%, 20 d: 86.000 %.

**12.3 BIOACCUMULATIVE POTENTIAL:**

Octanol/Water Partition Coefficient: Log Pow: -0.8 @20°C (68°F)  
Bio-Concentration Factor (BCF): 0.09

**12.4 MOBILITY IN SOIL:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high (Koc between 0 and 50)

**12.5 RESULTS OF PBT AND vPvB:**

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

**12.6 OTHER ADVERSE EFFECTS:**

**13. DISPOSAL CONSIDERATIONS**

**13.1 WASTE TREATMENT METHODS:**

Propylene 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. Offer surplus and non-recyclable solutions to a licensed disposal company.

**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) - Not Listed**

**SECTION 311/312: Hazard Categorization (40 CFR 370) – No SARA hazards.**

**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**

**Listed in the following state Right to Know Hazardous Material Lists: PA**

**Massachusetts Right to Know Components**

**No components are subject to the Massachusetts Right to Know Act.**

**Pennsylvania Right to Know Components  
Propane-1,2-diol CAS-No.57-55-6**

**New Jersey Right to Know Components  
Propane-1,2-diol CAS-No.57-55-6**

**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)**

**Propane-1,2-diol CAS-No.57-55-6 is listed on the TSCA Inventory.**

**15.2 CHEMICAL SAFETY ASSESSMENT: Not available**

**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=0 Fire=1 Reactivity=0  
HMIS RATINGS (SCALE 0-4): Health=0 Fire=1 Reactivity=0 PPE=B**

**Hazard statement(s) from Section 2 and 3:  
Not a hazardous substance or mixture.**

**Date of preparation-----> July 14, 2005**

**Revision Number-----> 1.6**

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

**Revision Date-----> January 31, 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.