

Material Safety Data Sheet

Revision Issued: 5/29/2012 Supercedes: 7/24/2007 First Issued: 4/10/1989

Section I - Chemical Product And Company Identification

Product Name: Propylene Glycol

CAS Number: 57-55-6

HBCC MSDS No. CP21500



HILL BROTHERS *Chemical Co.*

1675 NORTH MAIN STREET • ORANGE, CALIFORNIA 92867-3499
(714) 998-8800 • FAX: (714) 998-6310
<http://hillbrothers.com>

1675 No. Main Street, Orange, California 92867
Telephone No: 714-998-8800 | Outside Calif: 800-821-7234
Chemtrec: 800-424-9300

Section II - Composition/Information On Ingredients

Chemical Name	CAS Number	%	Exposure Limits (TWAs) in Air		
			ACGIH TLV	OSHA PEL	STEL
Propylene Glycol	57-55-6	100	N/A	N/A	N/A

Section III - Hazard Identification

Summary of Acute Health Hazards

Ingestion: While this material has a low degree of toxicity, ingestion of excessive quantities may cause signs of nervous system depression (e.g., headache, drowsiness, loss of coordination and fatigue).

Inhalation: While this material has a low volatility, exposure to vapors is unlikely, however, vapors or mists produced under certain conditions of use may cause signs of nervous system depression (e.g., headache, drowsiness, loss of coordination and fatigue).

Skin: May cause mild skin irritation. Prolonged or repeated contact may cause redness, burning and drying and cracking of the skin. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

Eyes: This material may cause mild eye irritation. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing and redness.

Summary of Chronic Health Hazards: Lactic acidosis, stupor and seizures have been reported following chronic ingestion.

Effects of Overexposure: N/A

Medical Conditions Generally Aggravated by Exposure: Kidney disorders

Note to Physicians: N/A

Section IV - First Aid Measures

Ingestion: No first aid is normally required; however, if swallowed, and symptoms develop, seek medical attention.

Inhalation: If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, immediately begin artificial respiration. If breathing difficulties develop

oxygen should be administered by qualified personnel. Seek immediate medical attention.

Skin: Wash with plenty of soap and water.

Eyes: Remove any contact lenses and flush with plenty of water for 15 minutes while holding eyelids open. Seek medical attention (preferably an ophthalmologist) if irritation persists.

Section V - Fire Fighting Measures

Flash Point: 214°F

Autoignition Temperature: 700°F

Lower Explosive Limit: 2.6

Upper Explosive Limit: 12.5

Unusual Fire and Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it may explode in the heat of a fire. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Vapors are heavier than air and may accumulate in low areas. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide, carbon dioxide.

Extinguishing Media: Carbon dioxide, Halon, Polar or Alcohol- type foam, or water spray is recommended. Water may be ineffective. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Do not use direct water stream. May spread fire. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Special Firefighting Procedures: Wear appropriate protective equipment including respiratory protection as conditions warrant. Stop spill/release if it can be done without risk. Move undamaged containers from fire area if it can be done without risk. Water spray may be useful in minimizing or dispersing and cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

Section VI - Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section VIII. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

Section VII - Handling and Storage

Protect container from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Do not cut or weld empty drums unless thoroughly cleaned.

Store away from direct sunlight or ultraviolet light. Keep container tightly closed when not in use. Shelf life: Use within 24 Months.

Section VIII - Exposure Controls/Personal Protection

Respiratory Protection: Respiratory protection may be necessary to minimize exposure. Depending on the nature and concentration of the airborne material, use a respirator or gas mask with appropriate cartridges and canisters (NIOSH approved) or supplied air equipment.

Ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Electrical systems safe for such locations must be used.

Protective Clothing: No skin protection is required for single, short duration exposures. For prolonged or repeated exposures use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. If handling hot material, use insulated protective clothing (boots, gloves, aprons, etc.) Launder soiled clothes. Properly dispose of contaminated leather articles including shoes, which cannot be decontaminated. Rubber gloves are recommended.

Eye Protection: Safety goggles and/or face shield is recommended.

Other Protective Clothing or Equipment: It is recommended that a source of clean water be available in the work area for flushing eyes and skin.

Work/Hygienic Practices: All employees who handle this product should wash their hands before eating, smoking, or using toilet facilities. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible.

Section IX - Physical and Chemical Properties

Physical State: Liquid

pH: Essentially neutral

Melting Point/Range: N/A

Boiling Point/Range: 369.3°F;
187.4°C

Appearance/Color/Odor: Colorless, odorless

Solubility in Water: 100%

Vapor Pressure: 0.129 at (77°F)

Specific Gravity(Water=1): 1.038 to
1.054

Molecular Weight: 76.10

Vapor Density(Air=1): 2.62

% Volatiles: 100

How to detect this compound : N/A

Dynamic Viscosity: 48.6 mPs @ 25°C

Pour Point: < -57°C (< -71°F)

Section X - Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Materials to Avoid: Strong acids, strong bases, and strong oxidizers.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Avoid heat, flame and other sources of ignition. Generation of gas during decomposition can cause pressure in closed systems. Avoid direct sunlight or ultraviolet sources.

Hazardous Decomposition Products: Decomposition products can include and are not limited to: Aldehydes, Alcohols, Ethers, Organic acids. Combustion may yield carbon monoxide an/or carbon dioxide. Do not breathe smoke or fumes, Wear appropriate protective equipment.

Section XI - Toxicological Information

Oral LD50 (Rat) is 20,000 - 34,000 mg/kg

Skin LD50, Rabbit > 20,000 mg/kg

In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Section XII - Ecological Information

Fish acute & prolonged toxicity: LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 44,000 – 51,600 mg/L. Aquatic invertebrate acute toxicity: EC50, water flea *Daphnia magna*, 48 h, immobilization: 4,850 – 34,000 mg/L. LC50, saltwater mysid *Mysidopsis bahia*, static, 96 h: 18,800 mg/L. Aquatic plant toxicity: EC50, green alga *Selenastrum caprocornutum*, biomass growth inhibition: 19,000 mg/L. Toxicity to micro-organisms: EC50, OECD 209 test; activated sludge, respiration inhibition, 3 h: > 1000 mg/L.

Section XIII - Disposal Considerations

Dispose of in accordance with applicable local, county, state and federal regulations. Do not dump into sewers, ground, or any body of water.

Section XIV - Transport Information

DOT Proper Shipping Name: N/A
DOT Hazard Class/ I.D. No.: N/A

Section XV - Regulatory Information

Reportable Quantity: N/A
NFPA Rating: Health - 0; Flammability - 1; Instability - 0
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
Uniform Fire Code Rating: Class IIIB Combustible Liquid
Carcinogenicity Lists: No | **NTP:** No | **IARC Monograph:** No
OSHA Regulated: No
311/312 Hazard Categories: This product should be reported as an immediate (acute) health hazard, and a delayed (chronic) health hazard.

Section XVI - Other Information

Synonyms/Common Names: Propylene Glycol; C₃H₈O₂; 1,2-propanediol; 1,2-dihydroxypropane; methyl glycol; methylethylene glycol
Chemical Family/Type: Oxygenated Hydrocarbon
Sections changed since last revision: IV, V, VII, VIII, IX, X, XIV, XV
IMPORTANT! Read this MSDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This MSDS has been prepared according to the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The MSDS information is based on sources believed to be reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Also, additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks prior to use, and then to exercise appropriate precautions for protection of employees and others.