

Material Safety Data Sheet

Revision Issued: 7/24/2007

Supersedes: 1/07/2000

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



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Section II - Composition/Information On Ingredients

			Exposure Limits (TWAs) in Air		
<u>Chemical Name</u>	<u>CAS Number</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>STEL</u>
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. Seek medical attention (preferably an ophthalmologist) if irritation persists.

Section V - Fire Fighting Measures

Flash Point: 214°F - 225°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. 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.

Store away from direct sunlight or ultraviolet light. Keep container tightly closed when not in use.

Shelf life: Use within 24.0 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: General room ventilation is satisfactory. Additional ventilation or exhaust systems may be required, where explosive mixtures may be present. Electrical systems safe for such locations must be used. **Protective Clothing:** Rubber gloves are recommended.

Protective Clothing: 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. Impervious clothing should be worn.

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: N/A

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: 0.3 mbar@25°C

Specific Gravity(Water=1): 1.038

Molecular Weight: 76.10

Vapor Density(Air=1): 2.62

% Volatiles: Negligible

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

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

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

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.

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; Fire - 1; Reactivity - 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

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: III, IV, V, VI, VII, VIII, IX, X, XI, XII, 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.

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