



Carolina International Sales Co., Inc

MATERIAL SAFETY DATA SHEET

2522 Plantation Center Drive
Matthews, NC 28105
(704) 845 9440

www.ciscochem.com

1. PRODUCT NAME: Propylene Glycol

2. CHEMICAL NAME: 1,2-Propanediol

3. SYNONYMS:

4. CAS NUMBER: 57-55-6

5. COMPOSITION: 1,2-Propanediol - 100%

6. PROPERTIES: ODOR & APPEARANCE: clear, colorless, hygroscopic odorless, syrupy liquid with a sweet taste
ODOR THRESHOLD: not known - odorless
VAPOUR PRESSURE: 0.07mmHg/0.009kPa (20 c)
EVAPORATION RATE (butyl Acetate=1): 0.005 – essentially not volatile
VAPOR DENSITY (air=1): 2.6
BOILING RANGE: 188 c
FREEZING POINT: -60 F
SPECIFIC GRAVITY: 1.038 (20/20 c)
WATER SOLUBILITY: complete
IN OTHER SOLVENTS: soluble in alcohols, ethers, ketones, esters; limited in hydrocarbons
VISCOSITY: 60 centipoise (20 c)
PH: none – does not yield hydrogen ions in solution
FLASH POINT: 99 c (closed cup)
AUTOIGNITION TEMPERATURE: 371 c
FLAMMABLE LIMITS: 2.6% - 12.5%
COMBUSTION PRODUCTS: carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments
FIREFIGHTING PRECAUTIONS: foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; firefighters must wear SCBA
STATIC DISCHARGE: will not accumulate a static charge
MECHANICAL IMPACT: not sensitive
CHEMICAL STABILITY: stable; will not polymerize
REACTIVE WITH: strong oxidizing agents; strong alkalies, strong acids
DECOMPOSITION PRODUCTS: none apart from Hazardous Combustion Products

7. HAZARDS: HMIS (USA): Health - 0, Fire - 1, Reactivity - 0

8. FIRE FIGHTING INFORMATION: Foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; firefighters must wear SCBA.

9. PERSONAL PROTECTION MEASURES: HANDS: not required, but butyl or neoprene rubber gloves may be worn
EYES: safety glasses with side shields
RESPIRATOR: not required unless high temperature processing, creating vapor, is carried out or if mist is generated; if ventilation is inadequate, use organic vapor cartridge
CLOTHING: not required, but non-slip footwear or flooring recommended

10. FIRST AID PROCEDURES: SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.
EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.
INHALATION: Remove from contaminated area promptly. CAUTION: Rescuer must not endanger

IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887



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himself! If breathing stops, administer artificial respiration and seek medical aid promptly.
INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.
NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

11. EXPOSURE TWAEV ppm: no listed
LIMITS: LD50 ORAL: 1650
SKIN (mg/kg): 9500
LC50ppm INHALATION: 10,900
Workplace Environmental Exposure Level (WEEL): 8-hr Time-Weighted Average (TWA) 50 ppm, total;
10 mg/cu m, aerosol only.

12. TOXICOLOGICAL EFFECTS ACUTE EXPOSURE
INFORMATION: SKIN CONTACT: virtually no effect
SKIN ABSORPTION: slight; no toxic effects anticipated by this route
EYE CONTACT: mildly irritating, will not damage eyes
INHALATION: vapor may irritate (if strongly heated); exposure unlikely due to low vapor pressure
INGESTION: although the product is an alcohol, it appears to have none of the classic effects
EFFECTS OF CHRONIC EXPOSURE
GENERAL: prolonged contact has caused irritation in 15% of a group of dermatitis sufferers
SENSITISING: not a sensitiser
REPRODUCTIVE EFFECT: no known effect on humans
SYNERGISTIC WITH: not known
ESTIMATED LD50: 18,500mg/kg (oral, rabbit & guinea pig), 20,000mg/kg (oral, rat), 22,000mg/kg (oral, mouse & dog); 20,800mg/kg (skin, rabbit)
LC50: not known

13. ECOLOGICAL This product cannot accumulate in living tissue; this product is readily and rapidly biodegradable when
INFORMATION: diluted, either under aerobic or anaerobic conditions; reported biodegradation (several studies) varies from 100% in 4 days (anaerobic) to 78% in 40 days (aerobic); estimated half-life in air ~32 hours.

14. DISPOSAL DO NOT FLUSH TO SEWER; may be incinerated in approved facility.
CONSIDERATIONS:

15. CARCINOGENIC Not a human or animal carcinogen or tumorigen.
PROPERTIES &
NOTIFICATIONS:

16. TRANSPORT USA 49 CFR
INFORMATION: Product identification number: UN – not regulated for transport
Shipping name: not regulated for transport
Classification: not regulated for transport
Label: not regulated for transport
WHMIS Class: not controlled under WHMIS



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17. **HANDLING & STORAGE:** Store and use in a cool dry environment, away from sources of ignition, heat and oxidizing agents. Do not cut, drill, weld or grind on or near this container. Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.
18. **ACCIDENTAL LEAK PRECAUTION:** dyke to control spillage and prevent environmental contamination.
RELEASE HANDLING SPILL: recover free liquid with suitable pumps; absorb residue on an inert sorbent, pick up MEASURES: using shovels, & store in closed containers for and disposal.
Warning: Spilled material may be very slippery, depending on flooring and footwear.
19. **REGULATORY INFORMATION:** **ALLOWABLE TOLERANCE:** Residues of propylene glycol are exempted from the requirement of a tolerance when used as a solvent, cosolvent in accordance with good agricultural practices as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Propylene glycol is exempted from the requirement of tolerance when used as a solvent, cosolvent in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals.
OTHER OCCUPATIONAL PERMISSIBLE LEVELS
Workplace Environmental Exposure Level (WEEL): 8-hr Time-Weighted Average (TWA) 50 ppm, total; 10 mg/cu m, aerosol only.
ATMOSPHERIC STANDARDS: This action promulgates standards of performance for equipment leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The intended effect of these standards is to require all newly constructed, modified, and reconstructed SOCMI process units to use the best demonstrated system of continuous emission reduction for equipment leaks of VOC, considering costs, non air quality health and environmental impact and energy requirements. Propylene glycol is produced, as an intermediate or final product, by process units covered under this subpart.
STATE DRINKING WATER GUIDELINES: New Hampshire 140,000 ug/l
TSCA REQUIREMENTS: Section 8(d) of TSCA, requires manufactures of this chemical substance to report preliminary assessment information concerned with production, use, and exposure to EPA as cited in the preamble in 51 FR 41329. Pursuant to section 8(d) of TSCA, EPA Promulgated a model Health and Safety Data Reporting Rule. The section 8(d) model rule requires manufactures, importers, and processors of listed chemical substance and mixtures to submit to EPA copies and lists of unpublished health and safety studies. Propylene glycol is included on this list.
FIFRA REQUIREMENTS: As the federal pesticide law FIFRA directs, EPA is conducting a comprehensive review of older pesticides to consider their health and environmental effects and make decisions about their future use. Under this pesticide registration program, EPA examines health and safety data for pesticide active ingredients initially registered before November 1, 1984, and determines whether they are eligible for registration. In addition, all pesticides must meet the new safety standard of the Food Quality Protection Act of 1996. Pesticides for which EPA had not issued Registration Standards prior to the effective date of FIFRA, as amended in 1988, were divided into three lists based upon their potential for human exposure and other factors, with List B containing pesticides of greater concern and List D pesticides of less concern. Propylene glycol is found on List C. Case No: 3126; Pesticide type: insecticide, fungicide, antimicrobial; Case Status: OPP is reviewing data from the pesticide's producers regarding its human health and/or environmental; effects, or OPP is determining the pesticide's eligibility for reregistration and developing the Reregistration Eligibility Decision (RED) document.; Active ingredient (AI): Propylene glycol; Data Call-in (DCI)Dates: 08/02/93; AI Status: The producers of the pesticide has made commitments to conduct the studies and pay the fees required for reregistration, and are meeting those commitments in a timely manner.
FDA REQUIREMENTS
Substance added directly to human food affirmed as generally recognized as safe (GRAS). Propylene glycol used as an emulsifying agent in animal drugs, feeds, and related products is generally recognized as safe when used in accordance with good manufacturing or feeding practice.