



5515 North Service Rd. #306
Burlington, Ontario L7L 6G4

Phone: 905-337-7411
Fax: 905-337-1686

megaloid.ca



Responsible Care®
Our commitment to sustainability.



Responsible Distribution Canada
Leaders in Chemicals and Ingredients

1. PRODUCT IDENTIFICATION

Name: *Propylene Glycol, Ind.*

Synonyms: *1,2-dihydroxypropane; propane-1,2-diol; 1,2-propylene glycol*

CAS# 57-55-6

Product Uses: *Non-Toxic antifreeze, non-toxic heat transfer fluid, manufacturer of polyester resins & other products.*

Supplier *Megaloid Laboratories Limited*

Identifier: *5515 North Service Road, Suite 306, Burlington, ON L7L 6G4
Phone: 905-337-7411 / Fax: 905-337-1686*

EMERGENCY INFORMATION: **Call CHEMTREC @ (800) 424-9300 (CCN # 693764)**

2. HAZARDS

GHS Class <i>(category)</i>	Not hazardous			
Signal Word	None			
Hazard Statements	None			

GHS Precautionary Statements for Labelling

None

3. COMPOSITION

Chemical Name:	CAS No.	%	Other Identifiers
<i>Propylene Glycol</i>	<i>57-55-6</i>	<i>100</i>	<i>EC # 200-338-0</i>

4. FIRST AID

Inhalation

Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.

Skin Contact

Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.

Eye Contact

Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.

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.

First-aid Comments

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. FIRE FIGHTING & FLAMMABILITY

Extinguishing Media

Suitable Extinguishing Media

Alcohol-resistant foam, dry chemical, water fog or spray.

Combustion Products

Carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments.

Special Protective Equipment and Precautions for Fire-fighters

Firefighters must wear SCBA.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Leak Precaution: dyke to control spillage and prevent environmental contamination.
Handling Spill: recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep, shovel & store in closed containers for recycling or disposal.

Other Information

Report spills to local health, safety and environmental authorities, as required.

7. HANDLING & STORAGE

Precautions for Safe Handling

If product is heated above 100°C / 212°F, ensure adequate ventilation and avoid generating vapour. If mist forms in use, install adequate exhaust ventilation. Never cut, drill, weld or grind on or near this container. Wash work clothes frequently. An eye bath should be available near the workplace.

Conditions for Safe Storage

Hygroscopic liquid; keep dry to preserve quality. Protect from open flame & oxidizing agents. Always ensure that containers, empty or full, are tightly sealed unless in use.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWAEV	<i>50ppm / 155mg/m³ (vapour & aerosol)</i>	Ontario STEV	<i>not listed</i>
ACGIH TLV	<i>not listed</i>	ACGIH STEL	<i>not listed</i>
OSHA PEL	<i>not listed</i>	OSHA STEL	<i>not listed</i>

Ventilation	<i>Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines.</i>
Hands	<i>Chemical protective gloves should not be needed when handling this material.</i>
Eyes	<i>Splash-proof chemical safety goggles or face shield (eight-inch minimum), as required.</i>
Clothing	<i>No precautions other than clean body-covering clothing should be needed.</i>

Appropriate Engineering Controls

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

9. PHYSICAL PROPERTIES

Appearance	<i>Clear, colourless, viscous, hygroscopic liquid.</i>
Odour	<i>Odourless</i>
Odour threshold	<i>Not available</i>
pH	<i>Not applicable</i>
Melting Point/Freezing Point	<i>-60 °C (-76 °F)</i>
Initial Boiling Point/Range	<i>184 °C (370 °F)</i>
Flash Point	<i>99 °C (210 °F) (closed cup)</i>
Evaporation Rate	<i>0.01 (n-butyl acetate = 1)</i>
Flammability (Solid, Gas)	<i>Not Available</i>
Upper/Lower Flammability or Explosive Limit	<i>12.5% (upper); 2.6% (lower)</i>
Vapour Pressure	<i>0.08 mm Hg at 20 °C (68 °F)</i>
Vapour Density (air = 1)	<i>2.5</i>
Relative Density (water = 1)	<i>1.037 at 20 °C (68 °F)</i>
Solubility	<i>Soluble in all proportions in water; all polar organic solvents & benzene, limited solubility in aliphatic hydrocarbons</i>
Partition Coefficient, n-Octanol/Water (Log Kow)	<i>-1.07</i>

Auto-ignition Temperature	371 °C (700 °F)
Decomposition Temperature	Not Available
Viscosity	56 centipoises at 20 °C (68 °F) (dynamic)
Physical State	Liquid
Molecular Weight	76 grams per mole
Molecular Formula	C3H8O2

10. REACTIVITY

Dangerously Reactive

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Strong oxidizing agents. Attacks polyvinyl chloride; elastomers like Dacron & epoxy are attacked above 95°C.

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.

Incompatible Materials

Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

11. TOXICITY

Prolonged skin exposure has caused irritation in 16% of dermatitis patients; irritation seen in normal people likely caused by skin dehydration due to local osmotic effects, disappearing rapidly after washing.

Acute Toxicity	
LD₅₀ (oral)	5240, 5800, 6700 & 97501mg/kg (rat), 5340 & 5600-8000mg/kg (rabbit), 3000 & 5245mg/kg (mouse)
LD50 (skin)	20,800mg/kg (rabbit)
LC50 (inhalation)	22,000mg/kg (rat) 20,000-30,000mg/kg (rat) – several tests, 22,000-23,900 & 24,900mg/kg (mouse), 22,000mg/kg (dog), 14,800 & 18,500mg/kg (rabbit), 18,900 & 19,700mg/kg (guinea pig)

Skin Corrosion/Irritation

Not a skin irritant.

Serious Eye Damage/Irritation

There is limited evidence of very mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Vapour or mist had little if any effect.

Skin Absorption

Some skin absorption; no toxic effects likely by this route.

Ingestion

Little to no effect; also little effect in experimental long-term inhalation studies.

STOT (Specific Target Organ Toxicity) - Repeated Exposure**Respiratory and/or Skin Sensitization**

Not a sensitizer in humans or animals

Carcinogenicity

Not a carcinogen.

Sexual Function and Fertility

No known effect in humans or animals

Germ Cell Mutagenicity

Not known to be a mutagen.

12. ECOLOGICAL INFORMATION

Bioaccumulation	<i>Not a bioaccumulator.</i>
Persistence and Degradability	Biodegradation - <i>Biodegrades readily & rapidly in the presence of oxygen; 55-75% in 5 days, 78-84% in 20 days; also 99% in 1-2 days (2 tests) – rapid biodegradation means Chronic Aquatic Toxicity testing not required</i> Abiotic Degradation - <i>reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 32 hours.</i>
Mobility in soil, water	<i>Sufficiently water soluble to move readily in soil & water.</i>
Aquatic Toxicity	
LC50 (Fish, 96hr)	<i>23,800mg/litre (Cyprinodon variegatus), 51,600mg/litre (Oncorhynchus mykiss), 51,400 & 54,650mg/litre (Pimephelas promelas)</i>
EC50 (Crustacea, 48hr)	<i>34,400 & 43,500mg/litre (Daphnia magna), 10,000mg/litre (Artemia salina, 24hr)</i>
EC50 (Algae)	<i>19,000mg/litre (Selenastrum capricornutum), 19,100mg/litre (Skeletonema costatum)</i>
EC50 (Bacteria)	<i>20,000mg/litre – NOAEC = No Observed Adverse Effect Concentration</i>

13. DISPOSAL**Water Disposal**

Do not flush to sewer, recycle solvent if possible, local regulations may permit disposal in sanitary landfill, may be incinerated in approved facility after mixing with a suitable flammable waste

Containers

Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.

Pails must be vented and thoroughly dried prior to crushing and recycling.

IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs).

Steel containers must be inspected, pressure tested & recertified every 5 years.

Never cut, drill, weld or grind on or near this container, even if empty

14. TRANSPORT CLASSIFICATION

<p align="center">Canada TDG</p> <p align="center">AND</p> <p align="center">U.S.A. 49 CFR</p>	<p align="center">PIN</p> <p align="center">Shipping Name</p> <p align="center">Class & Packing Group</p>	<p align="center">not regulated for transport</p>
<p align="center">Marine Pollutant</p> <p align="center">ERAP Required</p> <p align="center">Reportable Quantity</p> <p align="center">E R G No.</p>	<p align="center">Not a Marine Pollutant</p> <p align="center">NO</p> <p align="center">NO</p> <p align="center">None</p>	

15. REGULATIONS

<p align="center">Canada DSL</p> <p align="center">U.S.A. TSCA</p> <p align="center">Europe EINECS</p>	<p align="center">On Inventory</p> <p align="center">On Inventory</p> <p align="center">On Inventory</p>
---	--

U.S.A. Regulations

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

Additional USA Regulatory Lists

Acceptable Daily Intakes: JECFA: ADI: 0 to 25 mg/kg bw

Allowable Tolerances: Residues of propylene glycol are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Use: solvent, cosolvent. Residues of propylene glycol are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals. Use: solvent, cosolvent.

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 a final product, by process units covered under this subpart.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312: No SARA Hazards

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313: This material does not contain any chemical components with known CAS numbers that

State Drinking Water Standards: New York 1,000 ug/L

State Drinking Water Guidelines: New Hampshire 140,000 ug/ L

California Prop. 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

FIFRA Requirements: Residues of propylene glycol are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Use: solvent, cosolvent. Residues of propylene glycol are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals. Use: solvent, cosolvent. The Agency has completed its assessment of the dietary, drinking water, residential, ecological and occupational risks associated with the use of pesticide products containing the active ingredients propylene glycol and dipropylene glycol. Based on a review of these data, the Agency has sufficient formation on the human health and ecological effects of propylene glycol and dipropylene glycol to make a decision as part of the tolerance reassessment process under FFDCA and reregistration under FIFRA, as

amended by FQPA. The Agency has determined that propylene glycol and dipropylene glycol containing products are eligible for reregistration. EPA has determined that the established exemption from a requirement for a tolerance for propylene glycol and dipropylene glycol, meet the safety standards under the FQPA amendments to section 408(b)(2)(C) of the FFDCFA, that there is a reasonable certainty of no harm for infants and children. ... In determining whether or not infants and children are particularly susceptible to toxic effects from propylene glycol and dipropylene glycol residues, the Agency considered the completeness of the database for developmental and reproductive effects, the nature of the effects observed, and other information. The FQPA Safety Factor has been removed (i.e., reduced to 1X) for propylene glycol and dipropylene glycol because there is no pre- or post-natal evidence for increased susceptibility following exposure. 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 reregistration program, EPA examines newer health and safety data for pesticide active ingredients initially registered before November 1, 1984, and determines whether the use of the pesticide does not pose unreasonable risk in accordance to newer safety standards, such as those described in the Food Quality Protection Act of 1996. Pesticides for which EPA had not issued Registration Standards prior to the effective date of FIFRA '88 were divided into three lists based upon their potential for human exposure and other factors, with List B containing pesticides of greater concern than those on List C, and with List C containing pesticides of greater concern than those on List D. Propylene glycol is found on List C. Case No: 3126; Pesticide type: nsecticide, 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) Date(s): 08/02/93; AI Status: The producers of the pesticide have 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. Propylene glycol used as a general purpose food additive in animal drugs, feeds, and related products is generally recognized as safe when used in accordance with good manufacturing or feeding practice. Drug products containing certain active ingredients offered over-the-counter (OTC) for certain uses. A number of active ingredients have been present in OTC drug products for various uses, as described below. However, based on evidence currently available, here are inadequate data to establish general recognition of the safety and effectiveness of these ingredients for the specified uses: propylene glycol is included in pediculicide drug products. Ophthalmic demulcents. The active ingredients of the product consist of any of the following, within the established concentrations for each ingredient: Propylene glycol, 0.2 to 1 percent. The Food and Drug Administration has determined that propylene glycol in or on cat food is not generally recognized as safe and is a food additive subject to section 409 of the Federal Food, Drug, and Cosmetic Act (the act). The Food and Drug Administration also has determined that this use of propylene glycol is not prior sanctioned. The Food and Drug Administration has determined that propylene glycol in or on cat food has not been shown by adequate scientific data to be safe for use. Use of propylene glycol in or on cat food causes the feed to be adulterated and in violation of the Federal Food, Drug, and Cosmetic Act (the act), in the absence of a regulation providing for its safe use as a food additive under section 409 of the act, unless it is subject to an effective notice of claimed investigational exemption for a food additive under part 570.17 of this chapter, or unless the substance is intended for use as a new animal drug and is subject to an approved application under section 512 of the act or an effective notice of claimed investigational exemption for a new animal drug under part 511 of this chapter.

15. OTHER INFORMATION

NFPA RATING	Health 1	Flammability 1	Instability 0
--------------------	-----------------	-----------------------	----------------------

Prepared for

Megaloid Laboratories

by

Richard Koscher

Preparation Date: April 2010

Revision Dates: April 2013, May 2015, Oct 2017, Feb 2019

Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
Disclaimer	Megaloid Laboratories Limited provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Megaloid Laboratories Limited makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product which the information refers. Accordingly, Megaloid Laboratories Limited will not be responsible for damages resulting from the use of or reliance upon this information.