

Material Safety Data for: Tripropylene Glycol

1. PRODUCT IDENTIFICATION

Name	tripropylene glycol
Synonyms	propanol, [(1-methyl-1,2-ethanediyl)bis(oxy)]bis-; 2-(2-(2-hydroxypropoxy)propoxy)-1-propanol
CAS#	24800-44-0
Product Uses	brake & hydraulic fluids, resin mfg., plasticiser; solvent in pharmaceuticals, insecticides

2. INGREDIENTS

	%	TWAEV / TLV mg/m ³	LD ₅₀ ORAL	(mg/kg) SKIN	LC ₅₀ ppm INHALATION
Tripropylene Glycol	100%	not listed	3000	>16,300	not known

3. (a) HAZARDS SUMMARY

Hazards, Quick Guide: combustible under fire conditions

Canada – WHMIS

Key:

not controlled under WHMIS

B 2 – Flash Point <38°C, **B 3** – Flash Point >38°C & <93°C

D 1 – Immediately Toxic, **D 2** – Chronic Toxicity

C – Oxidising Substance, **E** – Corrosive

U.S.A. – HMIS

Key:

Health – 0, Fire – 1, Reactivity – 0

0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe

3. (b) HAZARDS – TOXICITY

Effects, Acute Exposure

Skin Contact	little to no effect
Skin Absorption	slight; no toxic effects possible by this route
Eye Contact	may be slightly irritating, will not damage eyes
Inhalation	unlikely route of entry for a viscous product with low vapour pressure
Ingestion	unknown – virtually without effect

Effects, Chronic Exposure

General	little effect; 1000mg/kg/day elevated liver weight in rats – <i>not relevant to industrial exposure</i>
Sensitising	not a sensitiser
Carcinogen/Tumorigen	not considered a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect in humans or animals
Mutagen	not known, no effect anticipated
Synergistic With	not known
Oral LD ₅₀	3000mg/kg (rat) – <i>values from 3000mg/kg to 12,000mg/kg have been reported</i>
Skin LD ₅₀	>16,300mg/kg (rabbit)
Inhalation LC ₅₀	not known

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4. FIRST AID

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

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. PHYSICAL PROPERTIES

Odour & Appearance	clear, colourless, sweet, hygroscopic, viscous liquid with no odour
Odour Threshold	not known – odourless
Vapour Pressure	<0.075mmHg / <0.01kPa (20°C / 68°F); 1mmHg / 0.13kPa (96°C / 200°F)
Evaporation Rate (<i>Butyl Acetate</i> = 1)	not known – not considered volatile
Vapour Density (air = 1)	6.6
Boiling Range	263-280°C / 505-536°F
Freezing Point	-30°C / -22°F – also reported as -20°C / -4°F – supercools readily
Specific Gravity	1.019 (25/25°C)
Water Solubility	complete
Also soluble in	most organic solvents, except aliphatic hydrocarbons
Viscosity	107centipoise (25°C / 77°F)
pH	none – (<i>does not liberate hydrogen ions when dissolved</i>)
Conversion Factor	128ppm = 1mg/litre
Molecular Weight	192grams per mole

6. FLAMMABILITY & FIRE FIGHTING

Flash Point	141°C / 285°F (closed cup)
Autoignition Temperature	not known
Flammable Limits	not known
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Firefighting Precautions	as for flammables sustaining fire; otherwise treat as an oil fire; firefighters must wear SCBA
Static Charge Accumulation	cannot accumulate a static charge

7. STABILITY / REACTIVITY

Dangerously Reactive With	strong oxidising agents
Also Reactive With	none known
Stability	stable; will not polymerize
Decomposes in Presence of	not known
Decomposition Products	none apart from Hazardous Combustion Products
Sensitive to Mechanical Impact	no

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8. PROTECTIVE EQUIPMENT / EXPOSURE CONTROL

ACGIH TLV	not listed
OSHA PEL	not listed
STEL	not listed
Ventilation	no special ventilation required; if product mist is created, mechanical exhaust ventilation should be installed to
	clear any visible haze
Hands	no special protective gloves required
Eyes	safety glasses with side shields – <i>always protect the eyes</i>
Clothing	no special protective clothing required

9. HANDLING & STORAGE

Tripropylene glycol is hygroscopic and absorbs moisture from the air. Store in a dry environment, away from open flame and oxidising agents.

Never cut, drill, weld or grind on or near this container. Avoid contact with skin and wash work clothes frequently. An eye bath and safety shower must be available near the workplace.

10. SPILL PROCEDURES

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

11. DISPOSAL

Waste Disposal	do not flush to sewer , recycle if possible, if local regulations permit, may be put in sanitary landfill, may be incinerated in approved facility after mixing with a flammable solvent
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. <i>Never cut, drill, weld or grind on or near this container, even if empty</i>

12. ENVIRONMENTAL INFORMATION

Bioaccumulation	this product is not a bioaccumulator
Biodegradation	aerobic degradation slow; 3% degradation in 28 days in unacclimated water
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; half life 3 hours
Mobility in soil, water	this product is water soluble and moves readily in soil and water
Aquatic Toxicity	
LC ₀ (Fish, 96hr)	10,000mg/litre (brachydanio rerio) – <i>no mortality, not toxic at 10 grams per litre</i>
LC ₅₀ (Crustacea, 48hr)	>10,000mg/litre (daphnia magna)
EC ₁₀ (Algae, 72hr)	>5000mg/litre (scenedesmus subspicatis)
EC ₅₀ (Bacteria, 24hr)	>50,000mg/litre (activated sludge)

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13. TRANSPORT REGULATIONS

Canada TDG	PIN	UN-not regulated for transport
AND	Shipping Name	not regulated for transport
U.S.A. 49 CFR	Class	not regulated for transport
	Packing Group	not regulated for transport
Marine Pollutant		not a marine pollutant

14. EMERGENCY INFORMATION

Canada	Call CANUTEC (collect)	(613) 996-6666
U.S.A.	Call CHEMTREC	(800) 424-9300

15. REGULATIONS

Canada DSL	on inventory
U.S.A. TSCA	on inventory
Europe EINECS	on inventory (EC# 246-466-0)

16. PREPARATION INFORMATION

Prepared for Megaloid Laboratories by Peter Bursztyn, (705) 734-1577

With data from RTECS, Haz. Substance Data Base, Cheminfo (CCOHS), IUCLID Datasheets (European Chem. Substance Info. System), & others, as available

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File Name: Triprop-Gly

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