



Safety Data Sheet

1. PRODUCT IDENTIFICATION

Name	Glycol Ether PnP
Synonyms	propylene glycol n-propyl ether; 1-propoxy-2-propanol, n-propoxypropanol, 1-propoxy-2-hydroxypropane, <i>alpha</i> -propylene glycol n-propyl ether & others
CAS#	1569-01-3 – <i>alternative CAS# 30136-13-1</i>
Europe EC#	216-372-4 – <i>alternative EC# 250-069-8</i>
Product Uses	solvent in coatings and hard surface cleaners

2. HAZARDS

Quick Guide: combustible liquid; combustion products may be harmful; irritating to eyes

Canada – WHMIS

Key:

B 3, D 2B

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, F – Reactive Substance

U.S.A. – HMIS

Key:

Health – 2, Fire – 2, Reactivity – 0

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

3. COMPOSITION

	%	TWAEV / TLV mg/m ³	LD ₅₀ (mg/kg) ORAL	LD ₅₀ (mg/kg) SKIN	LC ₅₀ ppm INHALATION
1-propoxy-2-propanol	100%	100* / 480*	2500	2805	>2450

** no established limit; manufacturer's recommendation*

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. FIRE FIGHTING & FLAMMABILITY

Flash Point	48°C / 115°F (closed cup)
Autoignition Temperature	252°C / 486°F
Flammable Limits	1.1% – 15%
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments (including formaldehyde, acetaldehyde & other irritating aldehydes)
Firefighting Precautions	alcohol resistant foam, dry chemical, water fog or spray; firefighters must wear SCBA
Static Charge Accumulation	cannot accumulate a static charge on agitation or pumping

Please ensure that this MSDS is given to, and explained to people using this product.

6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING & STORAGE

Store in a cool, dry environment, away from sources of ignition, heat and oxidising agents. *If workplace temperature exceeds 45°C / 115°F*, use non-sparking bronze or aluminium hand tools **and** ensure that all electrical and mechanical equipment (including lighting, switchgear and forklift trucks) used with or around this product are explosion-proof.

This product may react with oxygen in the air to form explosive or flammable peroxides. Ensure that containers are full and tightly sealed. If prolonged storage is anticipated, flush container headspace with dry nitrogen gas. Empty containers may contain a flammable / explosive vapour. Always ensure that containers, whether empty or full, are tightly sealed unless in use.

Avoid breathing product vapour. Use with adequate ventilation. If dealing with a spill, and ventilation is impossible or impractical, wear a suitable respirator with organic vapour cartridge.

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.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWAEV not listed
 TWAEV / TLV not listed – 100ppm / 480 mg/m³ – *manufacturer's recommendation*
 STEL not listed
 Ventilation mechanical ventilation is probably not required unless product is strongly heated
 Hands no special protective gloves required; butyl rubber or "Viton" are resistant – *other types may also protect; consult supplier to confirm suitability*
 Eyes safety glasses with side shields – *always protect the eyes*
 Clothing no special protective clothing required

9. PHYSICAL PROPERTIES

Odour & Appearance clear, colourless, hygroscopic liquid with mild ether odour
 Odour Threshold not known
 Vapour Pressure 1.7mmHg / 0.23kPa (20°C / 68°F)
 Evaporation Rate (*Butyl Acetate = 1*) 0.22
 Vapour Density (air = 1) 4.1
 Boiling Range 150°C / 302°F
 Freezing Point -80°C / -112°F
 Specific Gravity 0.886 (20/20°C)
 Water Solubility complete
 Also soluble in most organic solvents
 Viscosity 2.4centipoise (25°C / 77°F)
 pH none – (*does not liberate hydrogen ions when dissolved*)
 Conversion Factor 1ppm = 4.84mg/m³
 Molecular Weight 118grams per mole

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10. REACTIVITY

Dangerously Reactive With boron	strong oxidising agents may cause fire; may react violently with aluminium chloride or trichloride releasing hydrogen chloride
Also Reactive With strong	inorganic hypochlorites to form explosive organic hypochlorites and/or chloroform (toxic); reacts with epoxides; reacts with halogen gases & alkali metals to release hydrogen and alkali; reacts with strong acids, aldehydes & some ketones to cause heating
Stability	stable; will not polymerize
Decomposes in Presence of Decomposition Products	on prolonged exposure to air potentially explosive peroxides
Sensitive to Mechanical Impact	no

11. TOXICITY

Effects, Acute Exposure

Skin Contact	mildly irritating <i>if contact is not prolonged</i>
Skin Absorption	slight; no toxic effects likely by this route
Eye Contact	severely irritating in animals – <i>presumed irritating in humans</i>
Inhalation etc.	high concentrations (<i>saturated vapour</i>) may irritate & cause headache, dizziness, nausea,
Ingestion	may cause headache, nausea, vomiting – <i>not a route of industrial exposure</i>

Effects, Chronic Exposure

General	prolonged exposure may cause dermatitis & inflamed (red) skin
Sensitising	not a sensitiser in humans or animals
Carcinogen/Tumorigen	not considered a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect in humans, <i>teratogen in rats (but not rabbits) at doses causing maternal toxicity</i>
Mutagen	no known effect on humans or animals
Synergistic With	not known
LD ₅₀ (oral)	2875mg/kg (rat), (♀)2500 & (♂)4350mg/kg (rat),
LD ₅₀ (skin)	2805 & 3535mg/kg (rabbit) (♂)3800 & (♀)4350mg/kg (rabbit)
LC ₅₀ (inhalation)	>2450ppm (rat) – <i>no mortality seen</i>

12. ECOLOGICAL INFORMATION

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades readily in the presence of oxygen; 90% in 7 days*
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 15 hours
Mobility in soil, water	water soluble; moves readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 96hr)	above 100mg/litre (Oncorhynchus mykiss)*
EC ₅₀ (Crustacea, 48hr)	above 100mg/litre (Daphnia magna)*
EC ₅₀ (Algæ)	3440mg/litre (Pseudokirchnerella subcapitata – <i>new name for Selenastrum capricornutum</i>)*
EC ₅₀ (Bacteria)	no data

* see document link at end of this MSDS.

13. DISPOSAL

Waste Disposal	do not flush to sewer , recycle solvent if possible, may be incinerated in approved facility
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>

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14. TRANSPORT CLASSIFICATION

Canada TDG	PIN	UN - 1993
AND	Shipping Name	FLAMMABLE LIQUIDS N.O.S. (propylene glycol n-propyl ether)
U.S.A. 49 CFR	Class & Packing Group	3 (III)
Marine Pollutant		not a marine pollutant
ERAP Required		NO

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

Europe Classification *not classified as hazardous in Europe*

16. OTHER INFORMATION

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Data from RTECS, HSDB (Haz. Substance Data Base), Cheminfo (CCOHS), IUCLID Datasheets (ESIS – European Chem. Substance Info. System), & others.

Preparation Date: **May 2002** Revision Date: **May 2005, June 2008, June 2011, Nov 2011, Feb 2013**

* **Additional data from ECHA (European Chemicals Agency):**

http://apps.echa.europa.eu/registered/data/dossiers/DISS-9ea983fc-c075-01d0-e044-00144f67d031/AGGR-00a0b8f0-0d97-46f3-9380-67f19941161c_DISS-9ea983fc-c075-01d0-e044-00144f67d031.html#AGGR-00a0b8f0-0d97-46f3-9380-67f19941161c

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