

Material Safety Data for: Glycol Ether DPnP

1. PRODUCT IDENTIFICATION

Name	Dipropylene Glycol normal-Propyl Ether
Synonyms	1-(2-propoxy-1-methylethoxy)-2-propanol, Glycol Ether DPnP
CAS#	29911-27-1
Europe EC#	249-949-4
Product Uses	solvent

2. INGREDIENTS

	%	TWAEV / TLV ppm / mg/m ³	LD ₅₀ ORAL	(mg/kg) SKIN	LC ₅₀ ppm INHALATION
Dipropylene Glycol n-Propyl Ether	100%	not listed	1490	5200	not known

3. (a) HAZARDS SUMMARY

Hazards, Quick Guide: combustible liquid; may injure eyes if not washed promptly

Canada – WHMIS

Key:

B 3, D 2B due to possible eye injury
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 – 1, Fire – 1, Reactivity – 0
0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe

3. (b) HAZARDS – TOXICITY

Effects, Acute Exposure

Skin Contact	little or no effect
Skin Absorption	yes, but no toxic effects likely by this route
Eye Contact	slightly irritating; may injure if not washed promptly
Inhalation	little to no effect due to low vapour pressure at ambient temperatures
Ingestion	not known – may cause stomach discomfort and diarrhoea

Effects, Chronic Exposure

General	prolonged exposure may cause drying of skin, leading to dermatitis
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 or animals
Mutagen	no known effect on humans or animals
Synergistic With	not known
LD ₅₀ (oral)	1475mg/kg (rat), Lyondell data >2000mg/kg (rat)
LD ₅₀ (skin)	5340mg/kg (rabbit), Lyondell data >2000mg/kg (rat)
LC ₅₀ (inhalation)	not known

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

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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 liquid with mild ether odour
Odour Threshold	not known
Vapour Pressure	0.05mmHg / 0.0067kPa (20°C / 68°F)
Evaporation Rate (<i>Butyl Acetate = 1</i>)	0.013
Vapour Density (air = 1)	6
Boiling Range	212-213°C / 414-416°F
Freezing Point	-34°C / -30°F
Specific Gravity	0.922 (25/25°C)
Water Solubility	180 grams per litre (20°C / 68°F)
Also soluble in	most organic solvents
Viscosity	11centipoise (25°C / 77°F)
pH	none – (<i>does not liberate hydrogen ions when dissolved</i>)
Conversion Factor	1ppm = ~7mg/m ³
Molecular Weight	176grams per mole

6. FLAMMABILITY & FIRE FIGHTING

Flash Point	88°C / 190°F (Setaflash, closed cup)
Autoignition Temperature	205°C / 401°F
Flammable Limits	0.7%, upper limit not known
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Fire Fighting Precautions	foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; fire fighters must wear SCBA
Static Charge Accumulation	probably cannot accumulate a static charge on agitation or pumping

7. STABILITY / REACTIVITY

Dangerously Reactive With	strong oxidising agents
Also Reactive With	strong acids, strong alkalies
Stability	stable; will not polymerize
Decomposes in Presence of	oxygen (air) – <i>gradually</i>
Decomposition Products	apart from Hazardous Combustion Products, forms explosive peroxides on prolonged storage
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
Hands	no special protective gloves required; neoprene gloves may be worn
Eyes	safety glasses with side shields – <i>always protect the eyes</i>
Clothing	no special protective clothing required

9. HANDLING & STORAGE

Store in a cool, dry environment, away from sources of ignition, heat, strong acids and oxidising agents.

This product may react with oxygen in air to form explosive or flammable peroxides. ***Never distil to dryness.*** Ensure that containers are full and tightly sealed. If prolonged storage of a part container is anticipated, flush headspace with dry nitrogen gas prior to sealing. Empty containers may contain a flammable / explosive vapour. Always ensure that containers, whether empty or full, or part full, are tightly sealed unless in use.

Never 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 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 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>

12. ENVIRONMENTAL INFORMATION

Bioaccumulation	this product is not a bioaccumulator
Biodegradation	this product degrades readily and rapidly in the presence of oxygen; 92% biodegradation in 28 days
Abiotic Degradation	this product reacts with atmospheric hydroxyl radicals; estimated half-life in air is 2.7 hours
Mobility in soil, water	this product is water soluble and will move readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 96hr)	>100mg/litre (Oncorhynchus mykiss)
EC ₅₀ (Crustacea, 48hr)	>100mg/litre (Daphnia magna)
EC ₅₀ (Algae, 96hr)	>15.6mg/litre (Selenastrum Capricornutum)

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13. TRANSPORT REGULATIONS

<i>Canada TDG</i>	PIN	UN- not regulated for transport
	Shipping Name	not regulated for transport
	Class	not regulated for transport
	Packing Group	not regulated for transport
<i>U.S.A. 49 CFR</i>	PIN	NA-1993
	Shipping Name	COMBUSTIBLE LIQUIDS N.O.S. (dipropylene glycol n-propyl ether)
	Class	3, combustible liquid
	Packing Group	-
Marine Pollutant		not a marine pollutant

14. EMERGENCY INFORMATION

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

15. REGULATIONS

Canada DSL	on inventory
U.S.A. TSCA	on inventory
Europe EINECS	on inventory

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

*Preparation Date: **January 2004** Revision Date: **February 2007, February 2010***

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