



Safety Data Sheet

1. PRODUCT IDENTIFICATION

Name	Glycol Ether PnB
Synonyms	1-butoxy-2-propanol; n-butoxypropanol; propylene glycol n-butyl ether
CAS#	5131-66-8
Europe EC#	225-878-4
Product Uses	solvent in coatings, printing inks, cleaners, lubricants

2. HAZARDS

Quick Guide: combustible liquid, may irritate skin & 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



B3 – Combustible Liquid



D2B – Toxic

Substance

U.S.A. – HMIS

Key:

Health – 1/2, 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-butoxy-2-propanol	100%	not listed	2940	1340	not known

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	62°C / 144°F (closed cup, Lyondell); 63°C / 145°F (Dow)
Autoignition Temperature	260°C / 500°F
Flammable Limits	1.1% - 15%
Combustion Products	carbon monoxide, nitrogen oxides, smoke, irritating aldehydes & other compounds
Firefighting Precautions	foam, dry chemical, water spray, water jet spreads flames; firefighters must wear SCBA
Static Charge Accumulation	not known – may accumulate a static charge on agitation or pumping; <i>but other glycol ethers have sufficiently high electrical conductivity to prevent this</i>

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Product Name: Glycol Ether PnB

Decomposes in Presence of oxygen	oxygen – <i>Glycol Ethers tend to form explosive peroxides on prolonged contact with air</i>
Decomposition Products	explosive peroxides – <i>PnB appears less prone to peroxidation than other glycol ethers</i>
Sensitive to Mechanical Impact	no

11. TOXICITY**Effects, Acute Exposure**

Skin Contact	moderate skin irritant*
Skin Absorption	yes; total body immersion apart, no toxic effects likely by this route
Eye Contact	moderate* or severe eye irritant in animal tests
Inhalation	does not readily form a vapour unless temperature is raised; vapour not irritating & no central nervous effects expected at ambient temperature
Ingestion	not known – ingestion could cause dizziness, drowsiness, nausea – <i>not a route of industrial exposure</i>

Effects, Chronic Exposure

General	prolonged exposure may cause dermatitis, although no cases have been reported
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)	2940, 3300*, 4975 & 5230mg/kg (rat)
LD ₅₀ (skin)	1340 & 3130mg/kg (rabbit) & >2000mg/kg (rabbit) – <i>no mortality at 2000mg/kg*</i>
LC ₅₀ (inhalation)	not known – rats exposed to 600ppm for 31 days, 7 hr/day showed no ill effects*

* SIDS Initial Assessment Report Nov. 2003, <http://www.chem.unep.ch/irptc/sids/oecdsids/PGEs.pdf>

12. ECOLOGICAL INFORMATION

Bioaccumulation	rapidly eliminated; not a bioaccumulator; biological ½-life unknown
Biodegradation	degrades readily in the presence of oxygen; >60% in 28 days & >90% in 28 days*
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 4-5hr* (PnB)
Mobility in soil, water	water soluble; moves readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 96hr)	560-1000mg/litre (Poecilia reticulata)*
EC ₅₀ (Crustacea, 48hr)	>1000mg/litre (Daphnia magna)*
EC ₅₀ (Algæ)	not known – 42% growth inhibition seen at 1000mg/litre (Selenastrum capricornutum)
EC ₅₀ (Bacteria)	no data

* SIDS Initial Assessment Report Nov. 2003, <http://www.chem.unep.ch/irptc/sids/oecdsids/PGEs.pdf>

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- not regulated for transport
	Class	Shipping Name not regulated for transport
	Packing Group	not regulated for transport
U.S.A. 49 CFR	PIN	NA-1993
PnB)	Shipping Name	COMBUSTIBLE LIQUIDS N.O.S. (Glycol Ether
	Class	3, combustible
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
China IECSC	on inventory
Japan ENCS	on inventory
Korea ECI	on inventory
Philippines PICCS	on inventory
Australia AICS	on inventory
New Zealand NZLoC	on inventory

Europe Classification Harmful

Europe Risk Phrases R: 36/38 – Irritating to eyes & skin

Europe Safety Phrases S: 24/25, 26, 37 – Avoid contact with skin & eyes. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. Wear suitable gloves.

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: December 2003 Revision Date: December 2006, December 2009, December 2012

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