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**Responsible Care®**  
Our commitment to sustainability.



**RDC**  
Responsible Distribution Canada  
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## 1. PRODUCT IDENTIFICATION

**Name:** *Glycol Ether DPnB*

**Synonyms:** *1-(2-butoxy-1-methylethoxy)-2-propanol; n-butoxypropoxypropanol; dipropylene glycol n-butyl ether*

**CAS#** 29911-28-2; alternate CAS# 35884-42-5

**Product Uses:** *solvent*

**Supplier Identifier:** *Megaloid Laboratories Limited  
5515 North Service Road, Suite 306  
Burlington, Ontario, Canada  
L7L 6G4  
Phone: 905-337-7411 / Fax: 905-337-1686*

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

## 2. HAZARDS

<b>GHS Class</b> <i>(category)</i>	<b>Not Hazardous</b>			<b>Label Pictograms</b>
<b>Signal Word</b>	<b>None</b>			
<b>Hazard Statements</b>	<b>None</b>			

### GHS Precautionary Statements for Labelling

No Precautionary Statements

## 3. COMPOSITION

Chemical Name:	CAS No.	%	Other Identifiers
<i>Dipropylene Glycol n-Butyl Ether</i>	29911-28-2	100	EC # 249-951-5

## 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***

*Foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water - water jet spreads flames*

**Combustion Products**

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

**Special Protective Equipment and Precautions for Fire-fighters**

*Firefighters must wear SCBA. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.*

**Static Charge Accumulation**

*Probably cannot accumulate a static charge on agitation or pumping*

**6. ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment, and Emergency Procedures**

*Restrict access to area until completion of cleanup. Ensure cleanup is conducted by trained personnel only. Wear adequate personal protective equipment. Ventilate area. Extinguish or remove all ignition sources. Notify government occupational health and safety and environmental authorities.*

**Environmental Precautions**

*It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway. 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: Ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium 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

*This product may react with oxygen in air to form explosive or flammable peroxides; never distil to dryness. Keep containers full & 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 vapour. Always ensure that containers – empty or full – are tightly sealed unless in use.*

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

### Conditions for Safe Storage

*Store & use in a cool, dry environment, away from sources of ignition & oxidizing agents.*

## 8. EXPOSURE CONTROL & PERSONAL PROTECTION

**Ontario TWAEV** *not listed*  
**ACGIH TLV** *not listed*  
**OSHA PEL** *not listed*

**Ontario STEV** *not listed*  
**ACGIH STEL** *not listed*  
**OSHA STEL** *not listed*

<b>Ventilation</b>	<i>No special mechanical ventilation required</i>
<b>Hands</b>	<i>No special gloves required; neoprene gloves are resistant – other types may also protect</i>
<b>Eyes</b>	<i>Safety glasses with side shields – always protect the eyes</i>
<b>Clothing</b>	<i>No special protective clothing required</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.*

## 9. PHYSICAL PROPERTIES

<b>Appearance</b>	<i>Clear colourless liquid.</i>
<b>Odour</b>	<i>mild ether odour</i>
<b>Odour threshold</b>	<i>not known</i>
<b>pH</b>	<i>none – (does not liberate hydrogen ions when dissolved)</i>
<b>Melting Point/Freezing Point</b>	<i>below -75°C / -103°F</i>
<b>Initial Boiling Point/Range</b>	<i>230°C / 446°F</i>
<b>Flash Point</b>	<i>100°C / 213°F (Setaflash, closed cup) – also reported as 111°C / 231°F</i>
<b>Evaporation Rate</b>	<i>0.006 (Butyl Acetate =1)</i>
<b>Flammability ( Solid, Gas)</b>	<i>Not Available</i>
<b>Upper/Lower Flammability or Explosive Limit</b>	<i>0.6% – 20.4% (at elevated temperatures – 145°C &amp; 180°C)</i>

<b>Vapour Pressure</b>	0.068mmHg / 0.0091kPa (25°C / 77°F)
<b>Vapour Density (air = 1)</b>	6.6
<b>Specific Gravity</b>	0.911 (25/25°C)
<b>Water Solubility</b>	45 grams/litre (20°C / 68°F)
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	1.523
<b>Auto-ignition Temperature</b>	189°C / 372°F and 194°C / 381°F
<b>Conversion Factor</b>	1 ppm = 7.77 mg/m <sup>3</sup>
<b>Viscosity</b>	4.2centipoise (25°C / 77°F)
<b>Physical State</b>	Liquid
<b>Molecular Weight</b>	190 grams per mole
<b>Molecular Formula</b>	C10-H22-O3

## 10. REACTIVITY

**Dangerously Reactive** with strong oxidising agents.

**Also Reactive** with: none known

### Chemical Stability

Stable; will not polymerize

### Decomposes in Presence of

Not known

### Decomposition Products

None apart from Hazardous Combustion Products

### Sensitive to Mechanical Impact

No

## 11. TOXICITY

Acute Toxicity	
<b>LD<sub>50</sub> (oral)</b>	1475-4400mg/kg (rat – 4 tests), 1850, 2160, 3160 & 4000mg/litre (rat); 2160mg/kg (mouse)
<b>LD50 (skin)</b>	5340 & 6488mg/kg (rabbit), >2000mg/kg (rat) – no mortality seen
<b>LC50 (inhalation)</b>	>327mg/m <sup>3</sup> /42ppm, >2040mg/m <sup>3</sup> /263ppm, 5400mg/m <sup>3</sup> /695ppm (rat) – no mortality seen

### Skin Corrosion/Irritation

Little or no effect; considered “slightly irritating” by several sources

### Serious Eye Damage/Irritation

Slightly irritating

## STOT (Specific Target Organ Toxicity) - Single Exposure

### Inhalation

Little to no effect anticipated due to low vapour pressure at ambient temperatures  
Saturation vapour concentration @ 20°C = 90ppm; LC<sub>50</sub> >265ppm

### Skin Absorption

Yes, but no toxic effects likely by this route.

### Ingestion

Not known – may cause stomach discomfort and diarrhoea.

## STOT (Specific Target Organ Toxicity) - Repeated Exposure

Prolonged exposure may cause drying of skin, leading to dermatitis.

### Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer.

### Carcinogenicity

Not considered a carcinogen in humans or animals – NOAEL >11,070mg/m<sup>3</sup>, IARC: Not specifically listed. ACGIH®: Not specifically designated. NTP: Not specifically listed. OSHA: Not specifically listed.

## Reproductive Toxicity

### Sexual Function and Fertility

No known effect in humans or animals

### Germ Cell Mutagenicity

No known effect in humans or animals

## 12. ECOLOGICAL INFORMATION

<b>Bioaccumulation Persistence and Degradability</b>	<i>probably not a bioaccumulator due to moderately high water solubility</i> <b>Biodegradation -</b> <i>one test showed 0% biodegradation in 28 days, another 49% biodegradation under the same test conditions (OECD 301D), both in domestic sewage sludge; another (modified OECD) showed 91% in 28 days &amp; 60% in 10 days for “ready biodegradability”</i>  <b>Abiotic Degradation -</b> <i>estimated ½-life in air 2.6 hours</i>
<b>Mobility in soil, water</b>	<i>water soluble; moves readily in soil and water</i>
<b>Aquatic Toxicity</b>	
<b>LC50 (Fish, 96hr)</b>	<i>841mg/litre (Poecilia reticulata)</i>
<b>EC50 (Crustacea, 48hr)</b>	<i>&gt;1000mg/litre (Daphnia magna) – only 2 of 20 individuals lost swimming ability after 48hr</i>
<b>EC50 (Algae)</b>	<i>556mg/litre (“green algae”) – predicted from ECOSAR modelling</i>
<b>EC100 (Bacteria)</b>	<i>&gt;1.56mg/litre (Salmonella typhimurium)</i>

## 13. DISPOSAL

### Water 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.

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

## 14. TRANSPORT CLASSIFICATION

Canada TDG  AND  U.S.A. 49 CFR	PIN  Shipping Name Class & Packing Group	Dipropylene Glycol n-Butyl Ether	Not regulated for transport
Marine Pollutant ERAP Required Reportable Quantity E R G No.	Not a Marine Pollutant NO NO NO		

***Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.***

## 15. REGULATIONS

Canada DSL U.S.A. TSCA Europe EINECS	On Inventory On Inventory On Inventory
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### Canadian Regulations

#### **CEPA - National Pollutant Release Inventory (NPRI)**

Not specifically listed.

### U.S.A. Regulations

#### **SARA 302/304**

This product contains no known chemicals regulated under SARA 302/304.

#### **SARA 311/312**

Based upon available information, this material is classified as the following health and/or physical

#### **SARA 311/312**

hazards according to Section 311 & 312:

Health Hazards

Specific target organ systemic toxicity - single exposure

#### **SARA 313**

This product contains no known chemicals regulated under SARA 313.

### US State Regulations

Chemicals associated with the product which are subject to the state right-to-know regulations are listed along with the applicable state(s):

Pennsylvania -	Listed
New Jersey -	Listed
Massachusetts -	Listed

## National regulations

### Dipropylene Glycol Monobutyl Ether (29911-28-2)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican national Inventory of Chemical Substances)

Listed on Turkish inventory of chemical

## 16. OTHER INFORMATION

<b>NFPA RATING</b>	<b>Health 1</b>	<b>Flammability 1</b>	<b>Instability 0</b>
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Prepared for Megaloid Laboratories Limited by Richard Koscher

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<b>Key to Abbreviations</b>	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Protection Association 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
<b>References</b>	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).
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