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## 1. PRODUCT IDENTIFICATION

**Name:** *Glycol Ether EP*

**Synonyms:** *ethylene glycol monopropyl ether; ethylene glycol mono-n-propyl ether; 2-propoxyethanol; EP*

**CAS#** 2807-30-9

**Product Uses:** *solvent*

**Supplier Identifier:** *Megaloid Laboratories Limited  
5515 North Service Road, Ste 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><br><i>(category)</i> | <b>Flammable</b><br><i>(3)</i>              | <b>Acute oral</b><br><i>(4)</i>    | <b>Acute skin</b><br><i>(3)</i>          | <b>Acute inhalation</b><br><i>(2A)</i> | <b>Eye irritant</b><br><i>(2)</i>           |
|---------------------------------------|---|------------------------------------|--|--|---|
| <b>Signal Word</b>                    | <b>DANGER</b>                               |                                    |  |  |   |
| <b>Hazard Statements</b>              | <i>flammable liquid &amp; vapour (H226)</i> | <i>Harmful if swallowed (H302)</i> | <i>Toxic in contact with skin (H311)</i> | <i>Toxic if inhaled (H332)</i>         | <i>Causes serious eye irritation (H319)</i> |



### GHS Precautionary Statements for Labelling

**Prevention**

- P210** Keep away from heat, sparks, open flames and hot surfaces. No smoking.
- P240** Ground or bond container and receiving equipment.
- P241** Use explosion-proof electrical, ventilating and lighting equipment.

|                         |   |
|-------------------------|---|
| <b>P242</b>             | Use only non-sparking tools.  |
| <b>P243</b>             | Take precautionary measures against static discharge.   |
| <b>P260</b>             | Do not breathe mist or vapours or spray.  |
| <b>P262</b>             | Do not get in eyes or on skin.  |
| <b>P264</b>             | Wash hands thoroughly after handling.   |
| <b>P280</b>             | Wear eye protection, protective gloves and clothing of butyl rubber   |
| <b>Response</b>         |   |
| <b>P304, P340</b>       | IF INHALED: remove person to fresh air and keep comfortable for breathing.  |
| <b>P313 &amp; P333</b>  | If skin irritation or rash occurs, get medical advice/attention.  |
| <b>P305, P351, P338</b> | IF IN EYES: rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. |
| <b>P370, P378</b>       | IN CASE OF FIRE: use alcohol-resistant foam to extinguish.  |
| <b>Storage</b>          |   |
| <b>P403 + P235</b>      | Store in a well-ventilated place. Keep cool.  |
| <b>P405</b>             | Store locked up.  |
| <b>Disposal</b>         |   |
| <b>P501</b>             | Dispose of contents and container in accordance with local, regional, national and international regulations.                     |

### 3. COMPOSITION

| Chemical Name:                          | CAS No.   | %   | Other Identifiers |
|---|-----------|-----|-------------------|
| <i>Ethylene glycol monopropyl ether</i> | 2807-30-9 | 100 | EC # 220-548-6    |

### 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. Do not use a solid water stream as it may scatter and spread fire.*

### 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.*

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

*Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment.*

### Environmental Precautions

*Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. 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.*

## 7. HANDLING & STORAGE

### Precautions for Safe Handling

*In common with other glycol ethers, 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 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. Avoid breathing product vapour. Use with adequate ventilation.*

*Never cut, drill, weld or grind on or near this container. EP is absorbed via the skin and may cause kidney damage by this route. Avoid all contact with skin and wash work clothes frequently. An eye bath and safety shower must be available near the workplace.*

### Conditions for Safe Storage

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

## 8. EXPOSURE CONTROL & PERSONAL PROTECTION

**Ontario TWAEV** 25ppm / 110mg/m<sup>3</sup> (skin)  
**AGGIH TLV** not listed  
**OSHA PEL** not listed

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

*Dow Chemical recommends a TLV of 20ppm / 85mg/m<sup>3</sup> (skin) & a STEL of 60ppm / 255mg/m<sup>3</sup>*

|                    |   |
|--------------------|---|
| <b>Ventilation</b> | <i>mechanical ventilation may be required to control airborne titre; depending on handling procedures</i>     |
| <b>Hands</b>       | <i>wear nitrile or "Viton" gloves – other types may also protect; consult supplier to confirm suitability</i> |
| <b>Eyes</b>        | <i>Safety glasses with side shields – always protect the eyes</i>   |
| <b>Clothing</b>    | <i>wear impermeable (above) apron, boots, &amp; long sleeves if there is any danger of splashing.</i>         |

## 9. PHYSICAL PROPERTIES

|   |  |
|---|--|
| <b>Appearance</b>                                       | <i>Clear colourless liquid.</i>  |
| <b>Odour</b>  | <i>mild ether odour and a bitter taste</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>-20°C / -4°F</i>  |
| <b>Initial Boiling Point/Range</b>                      | <i>147°C / 297°F, 150-152°C / 302-306°F</i>                            |
| <b>Flash Point</b>                                      | <i>51°C / 124°F (EU Method A.9), 125°C / 257°F (open cup)</i>          |
| <b>Evaporation Rate</b>                                 | <i>0.2 (Butyl Acetate =1)</i>  |
| <b>Flammability ( Solid, Gas)</b>                       | <i>Not Available</i>   |
| <b>Upper/Lower Flammability or Explosive Limit</b>      | <i>1.3% – 15.8%</i>  |
| <b>Vapour Pressure</b>                                  | <i>2.9mmHg / 0.39kPa (25°C / 77°F), also 4.8mmHg / 0.643kPa (25°C)</i> |
| <b>Vapour Density (air = 1)</b>                         | <i>3.6</i>   |
| <b>Specific Gravity</b>                                 | <i>0.912 (20/20°C), also 0.911kg/litre (20°C)</i>                      |
| <b>Water Solubility</b>                                 | <i>Complete. Also soluble in most organic solvents</i>                 |
| <b>Partition Coefficient, n-Octanol/Water (Log Kow)</b> | <i>0.673</i>   |
| <b>Auto-ignition Temperature</b>                        | <i>256°C / 493°F</i>   |
| <b>Conversion Factor</b>                                | <i>1ppm = 4.25mg/m<sup>3</sup></i>                                     |
| <b>Viscosity</b>  | <i>1.87centistokes (40°C / 104°F)</i>                                  |
| <b>Physical State</b>                                   | <i>Liquid</i>  |
| <b>Molecular Weight</b>                                 | <i>104 grams per mole</i>  |
| <b>Molecular Formula</b>                                | <i>C6H14O2</i>   |

## 10. REACTIVITY

**Dangerously Reactive** with strong oxidising agents.  
**Also Reactive** with strong alkalis, strong acids.

### Chemical Stability

stable; will not polymerize

### Possibility of Hazardous Reactions

Forms peroxides of unknown stability.

### Conditions to Avoid

Heat, flames and sparks.

### Mechanical Impact

not sensitive

## 11. TOXICITY

| Acute Toxicity                      |   |
|-------------------------------------|---|
| <b>LD<sub>50</sub> (oral)</b>       | 3090mg/kg (rat, fasted), 6180mg/kg (rat, fed), 3200 & 5000mg/kg (rat), 1775mg/kg (mouse, fasted), 3090mg/kg (mouse, fed), 2260mg/kg (mouse), 2200mg/kg (guinea pig) |
| <b>LD<sub>50</sub> (skin)</b>       | 875 & 1337mg/kg (rabbit), >1000, 2045 & 56501mg/kg (guinea pig)   |
| <b>LC<sub>50</sub> (inhalation)</b> | 1530ppm (mouse), >980, 2130 & 2175ppm (rat)   |

### Skin Corrosion/Irritation

slightly irritating (rabbit), slight & moderate irritant (guinea pig – 2 reports).

### Serious Eye Damage/Irritation

may be a severe eye irritant from animal tests; probably not corrosive to eyes.

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

#### Inhalation

vapour may irritate; exposing rabbits to saturated vapour for 7 hrs caused kidney damage (blood in urine).

#### Skin Absorption

yes; toxic effects may occur by this route.

#### Ingestion

not known – not a route of industrial exposure.

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

Prolonged exposure may cause dermatitis; inhalation or ingestion may damage kidneys (blood in urine).

#### Respiratory and/or Skin Sensitization

not a sensitiser in humans or animals.

#### Carcinogenicity

not considered a tumorigen or a carcinogen in humans or animals.

### Reproductive Toxicity

#### Sexual Function and Fertility

fetotoxic in rodents at doses also causing maternal symptoms; no known effect in humans

#### Germ Cell Mutagenicity

no known effect on humans or animals.

## 12. ECOLOGICAL INFORMATION

|                                      |   |
|--------------------------------------|---|
| <b>Bioaccumulation</b>               | <i>water soluble – not a bioaccumulator</i>   |
| <b>Persistence and Degradability</b> | <b>Biodegradation -</b><br><i>readily biodegradable: 100% in 20 days; 66% in 10 days</i>                              |
|                                      | <b>Abiotic Degradation -</b><br><i>reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 18 hours</i> |
| <b>Mobility in soil, water</b>       | <i>water soluble; moves readily &amp; rapidly in soil and water</i>   |
| <b>Aquatic Toxicity</b>              |   |
| <b>LC50 (Fish, 96hr)</b>             | <i>&gt;5000mg/litre (Pimephales promelas)</i>   |
| <b>EC50 (Crustacea, 48hr)</b>        | <i>&gt;5000mg/litre (Daphnia magna)</i>   |
| <b>EC50 (Algae, hrs)</b>             | <i>&gt;100mg/litre (Pseudokirchneriella subcapitata)</i>  |
| <b>EC50 (Bacteria)</b>               | <i>2000mg/litre (Photobacterium phosphoreum)</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

|                            |                                  |  |   |
|----------------------------|----------------------------------|--|---|
| <b>Canada TDG</b>          | <b>PIN</b>                       | UN1993   |  |
| <b>AND</b>                 | <b>Shipping Name</b>             | Flammable<br>Liquid, n.o.s.<br>(ethylene glycol<br>propyl ether) |   |
| <b>U.S.A. 49 CFR</b>       | <b>Class &amp; Packing Group</b> | 3, PG III  |   |
| <b>Marine Pollutant</b>    | Not a Marine Pollutant           |  |   |
| <b>ERAP Required</b>       | NO                               |  |   |
| <b>Reportable Quantity</b> | NO                               |  |   |
| <b>E R G No.</b>           | 128                              |  |   |

## 15. REGULATIONS

|                    |              |
|--------------------|--------------|
| <b>Canada DSL</b>  | On Inventory |
| <b>U.S.A. TSCA</b> | On Inventory |

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|               |              |
|---------------|--------------|
| Europe EINECS | On Inventory |
|---------------|--------------|

## Canadian Regulations

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

Part 1A, Part 5.

## U.S.A. Regulations

**Atmospheric Standards:** This action promulgates standards of performance for equipment leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The intended effect of these standards is to require all newly constructed, modified, and reconstructed SOCMI process units to use the best demonstrated system of continuous emission reduction for equipment leaks of VOC, considering costs, non air quality health and environmental impact and energy requirements. Ethylene glycol monopropyl ether is produced, as an intermediate or final product, by process units covered under this subpart.

## Global Inventory Status

| Country/Region | Inventory | Status Description |
|----------------|-----------|--------------------|
| Australia      | AICS      | Compliant          |
| China          | IECSC     | Compliant          |
| Japan          | ENCS      | Compliant          |
| Korea          | KECI      | Compliant          |
| New Zealand    | NZIoC     | Compliant          |
| Philippines    | PICCS     | Compliant          |
| Taiwan         | TCSCA     | Compliant          |

## 16. OTHER INFORMATION

|                    |                 |                       |                      |
|--------------------|-----------------|-----------------------|----------------------|
| <b>NFPA RATING</b> | <b>Health 1</b> | <b>Flammability 3</b> | <b>Instability 0</b> |
|--------------------|-----------------|-----------------------|----------------------|

Prepared for Megaloid Laboratories Limited by Richard Koscher

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|                             |   |
|-----------------------------|---|
| <b>Key to Abbreviations</b> | ACGIH® = American Conference of Governmental Industrial Hygienists<br>AIHA® = AIHA® Guideline Foundation<br>HSDB® = Hazardous Substances Data Bank<br>IARC = International Agency for Research on Cancer<br>NFPA = National Fire Protection Association<br>NIOSH = National Institute for Occupational Safety and Health<br>NIOSH = National Institute for Occupational Safety and Health<br>NTP = National Toxicology Program<br>OSHA = US Occupational Safety and Health Administration<br>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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