

Material Safety Data for: Glycol Ether DP

1. PRODUCT IDENTIFICATION

Name Diethylene Glycol Monopropyl Ether
Synonyms 2-(2-propoxyethoxy)ethanol; DP
CAS# 6881-94-3
Product Uses solvent

2. INGREDIENTS

| | % | TWAEV / TLV ppm / mg/m ³ | LD ₅₀ ORAL | (mg/kg) SKIN | LC ₅₀ ppm INHALATION |
|------------------------------------|------|--|--------------------------|-----------------|------------------------------------|
| Diethylene Glycol Monopropyl Ether | 100% | not listed | 3810 | 5050 | not known |

3. (a) HAZARDS SUMMARY

Hazards, Quick Guide: combustible liquid, irritating to eyes

Canada – WHMIS

Key:

B 3, D 2B (eye irritation)

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 | may be slightly irritating |
| Skin Absorption | yes, no toxic effects likely by this route |
| Eye Contact | may irritate the eyes; will not damage eyes |
| Inhalation | may irritate but low vapour pressure makes this effect unlikely at ambient temperature |
| Ingestion | not known – may cause stomach discomfort and diarrhoea |

Effects, Chronic Exposure

| | |
|-------------------------------|---|
| General | prolonged exposure may cause drying, 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) | 6660mg/kg (rat), 3810mg/kg (mouse) |
| LD ₅₀ (skin) | 5050mg/kg (guinea pig) |
| LC ₅₀ (inhalation) | not known |

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

4. FIRST AID

- SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or 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 | 0.005mmHg / 0.0067kPa (20°C / 68°F) |
| Evaporation Rate (<i>Butyl Acetate = 1</i>) | 0.01 |
| Vapour Density (air = 1) | 5 |
| Boiling Range | 215°C / 420°F |
| Freezing Point | -68°C / -92°F |
| Specific Gravity | 0.076 (20/20°C) |
| Water Solubility | complete |
| Also soluble in | most organic solvents |
| Viscosity | 4centipoise (25°C / 77°F) |
| pH | none – (<i>does not liberate hydrogen ions when dissolved</i>) |
| Molecular Weight | 148grams per mole |

6. FLAMMABILITY & FIRE FIGHTING

| | |
|----------------------------|--|
| Flash Point | 93°C / 199°F (closed cup) |
| Autoignition Temperature | 204°C / 400°F |
| Flammable Limits | lower = 0.85%, 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 | none known |
| Stability | stable; will not polymerize |
| Decomposes in Presence of | oxygen in air – <i>gradually</i> |
| Decomposition Products | apart from Hazardous Combustion Products, potentially explosive peroxides |
| Sensitive to Mechanical Impact | no |

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8. PROTECTIVE EQUIPMENT / EXPOSURE CONTROL

| | |
|-------------|---|
| TWAEV / TLV | not listed |
| STEL | not listed |
| Ventilation | probably not required, unless mist is generated or product is handled at high temperature; in this case, local ventilation of mist or vapour should be installed, or handling should be confined to a closed vessel |
| Hands | not required but nitrile or "Viton" gloves may be worn – <i>consult supplier to confirm suitability</i> |
| 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 and oxidising agents.

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 / 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 & pick up using plastic or aluminium 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 | not known, but extrapolating from similar substances (DB), this product is not a bioaccumulator |
| Biodegradation the | not known, but extrapolating from similar substances (DB), this product should degrade readily in the presence of oxygen with an expected half life of ~20 days |
| Abiotic Degradation atmospheric | not known, but extrapolating from similar substances (DB), this product should react with hydroxyl radicals with an expected half-life in air of 10 hours |
| Mobility in soil, water | this product is water soluble and will move readily in soil and water |
| Hazardous to Water | this product has a low toxicity to marine creatures |

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13. TRANSPORT REGULATIONS

| | | |
|-------------------|----------------------|--|
| <i>Canada TDG</i> | PIN | UN-not regulated for transportation |
| | Shipping Name | not regulated for transportation |
| | Class | not regulated for transportation |
| | Packing Group | not regulated for transportation |

NOTE: This product is on the borderline of meeting the criteria for regulation in the USA. Some suppliers may ship as not regulated, others may use the classification given below. Eastman Chemical Company does not classify DP as hazardous.

| | | |
|-------------------------|----------------------|--|
| <i>U.S.A. 49 CFR</i> | PIN | NA-1993 |
| | Shipping Name | COMBUSTIBLE LIQUIDS N.O.S. (diethylene glycol monopropyl ether) |
| | Class | 3 |
| | Packing Group | III |
| 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

| | |
|-----------------------|--------------------------------|
| Australia AICS | <i>not on inventory</i> |
| Canada DSL | on inventory |
| U.S.A. TSCA | on inventory |
| Europe EINECS | on inventory |
| Japan ENCS | on inventory (recently) |
| Korea ECL | <i>not on inventory</i> |

SARA 311/312 immediate acute health hazard
SARA 313 listed

16. PREPARATION INFORMATION

Prepared for Megaloid Laboratories by Peter Bursztyn, (705) 734-1577
Data from RTECS, Haz. Substance Data Base, Cheminfo, manufacturer data, and other source, as available
Preparation Date: **January 2003** Revision Date: **February 2007**

File Name: **DP**

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