

# MATERIAL SAFETY DATA SHEET

## Generic MSDS

For reference purposes only

Hazardous according to criteria of Worksafe Australia.

## I IDENTIFICATION

Product Name: Ethylene Glycol

Other Names: Monoethylene glycol

UN No: None allocated.

Hazchem Code: None allocated.

Dangerous Goods Class: None allocated.

Sub Risk Class: No Subsidiary Risk.

Packaging Group: None allocated.

EPG: None allocated.

Poison Schedule: Not Scheduled.

Product Type: Organic liquid.

Chemical Family: Glycol.

Uses: Chemical intermediate; solvent; antifreeze ingredient.

### Physical appearance & Properties:

Appearance & Odour: Colourless liquid. Mild odour.

Melting/softening point: -12.7°C

Boiling point and vapour pressure: 198°C, 100kPa

Volatile materials: Very low at 100°C

Flashpoint: 116°C, cc

Specific gravity: 1.12, 20/20°C

Solubility in water: Completely soluble.

Corrosiveness: Not corrosive.

### Ingredients:

Chemical entity	CAS No	Proportion %	Worksafe Exposure Limits	
			TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>
Ethylene glycol	107-21-1	pure *	60	120

\* Commercially pure.

This is a commercial product, and the exact ratio of components may vary. Trace quantities of impurities are also likely.

## II HEALTH HAZARD DATA

### Health Effects:

No specific data is available for the product for chronic exposure symptoms. The ingredients are not listed as carcinogenic in Worksafe's document "Exposure Standards for Atmospheric Contaminants in the Occupational Environment" (May 1995).

### Acute Effects:

Swallowed: Data suggests that the product should be considered to be harmful by ingestion. Causes drunkenness, rapidly passing into coma and is associated with serious or fatal kidney injury.

Eye: Data suggests that this product should be classified as non irritating to the eyes.

Skin: Data suggests that the product should be classified as not irritating or harmful to the skin.

Inhalation: Data suggests that the product should be considered to be non irritating and non toxic by inhalation.

Primary route of exposure is inhalation and skin and eye contact.

### First Aid:

If poisoning occurs, contact a Doctor or Poisons Information Centre.

If swallowed, and if more than 15 minutes from a hospital, induce vomiting, preferably using Ipecac Syrup APF.

# MATERIAL SAFETY DATA SHEET

**Eye:** If this product comes into contact with eyes, hold open and wash with running water. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained.

**Skin:** If this product comes into contact with skin, wash skin with soap and water. Remove contaminated clothing and footwear. Ensure contaminated clothing is thoroughly washed before using again.

**Inhalation:** If mists, dusts or combustion products are inhaled, remove to fresh air. Lay victim down & keep warm and rested. If breathing is shallow, or has stopped, ensure clear airway and apply resuscitation or oxygen if available. Transport to hospital or doctor immediately.

**Advice to doctor:** Treat symptomatically. Note the nature of this product.

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## III PRECAUTIONS FOR USE

Risk Phrases are: R22. Harmful if swallowed.

### **Exposure Standards:**

A TWA value of 60 and a STEL value of 120 has been established for this product. Values expressed as mg/m<sup>3</sup>. Exposure values at the STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. Exposure values at the TWA (Time Weighted Average) means the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. See ingredients section on page 1 of this data sheet.

### **Engineering Controls:**

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.

### **Personal Protection:**

**Respiratory Protection:** A face mask or respirator may be used when the product is being used in dusty or confined areas. Otherwise it is usually safe to not use respiratory protection. However, there may be other circumstances where use of a mask or other device is preferred. Use judgement. For help in selecting suitable equipment consult AS/NZS 1715.

**Protective Gloves:** Rubber, PVC or other protective gloves are not necessary but are desirable, especially if product is being used frequently or for lengthy periods. For help in selecting suitable gloves consult AS 2161.

**Eye Protection:** Eye protective measures are not normally necessary, but are suggested when using this product. Consult AS 1336 and AS/NZS 1337 for information about eye protection.

**Clothing:** Clean overalls should be worn, preferably with an apron. Consult AS 2919 for advice on Industrial Clothing.

**Safety Boots:** Wearing safety boots is advisory. Consult AS/NZS 2210 for advice on Occupational Protective Footwear.

**Flammability Limits:** Upper: 15.3% (estimated), Lower: 3.2%

Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

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## IV SAFE HANDLING INFORMATION

Safety Phrases are: S20. When using, do not eat or drink.

### **Storage & Transport:**

No special storage and transport requirements. This material has no UN Classification.

Not a Scheduled Poison. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames, and make sure the material does not come into contact with products listed under "Materials to avoid" below.

### **Spills and disposals:**

In event of a major spill, prevent spillage from entering drains or water courses. Call Fire Brigade or emergency services. Wear full protective clothing including face mask, face shield and gauntlets. Stop leak if safe to do so, and contain spill. Absorb onto vermiculite or other absorbent material. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage. Recycle containers wherever possible. After spills, wash area, preventing runoff from entering drains. If material enters drains, advise emergency services. This material may be suitable for approved landfill. Dispose of only in compliance with local, state and federal regulations. Launder all contaminated clothing before re-use.

### **Fire/Explosion Hazard:**

There is no explosion hazard from this material under normal circumstances.

Product Ethylene Glycol

Page 2 of 3

For reference purposes only

Generic MSDS

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# MATERIAL SAFETY DATA SHEET

Flashpoint: 116°C, cc

Extinguishing Media: carbon dioxide, dry chemical, foam, water fog.

Special Fire fighting procedures: Wear full protective clothing including face mask, face shield and gauntlets.

Unusual fire & Explosion hazards: Decomposition products are toxic. There is a slight risk of an explosion from this product if involved in a fire.

Stability: Stable.

Polymerisation: Will not polymerise.

Decomposition Products: carbon dioxide, carbon monoxide and smoke (if combustion is incomplete), water.

Materials to avoid: strong acids, strong bases, strong oxidising agents.

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## V OTHER INFORMATION

This MSDS is prepared in accord with the Worksafe Australia document "National Code of Practice for the Preparation of Material Safety Data Sheets", 1994.

### Contact Points:

**Police and Fire Brigade:**

**Dial**

**AUSTRALIA**

**000**

**If ineffective:**

**Dial**

**1100 (Exchange)**

**National Poisons Information Centre:**

**Dial**

**13 1126 (from anywhere in Australia)**

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Please read all labels carefully before using product.