



SAFETY DATA SHEET

SECTION 1 IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Identifier	MONO ETHYLENE GLYCOL
Other Names	Ethylene glycol, Glycol, MEG, Ethylene diol, 1,2-Ethanediol
Manufacturer's Product Code	19950
Recommended Use	Radiator antifreeze coolant base fluid

Details of Supplier/Manufacturer

Company:	Recochem Inc. ABN: 69 010 485 999
Address:	1809 Lytton Road, Lytton, Queensland 4178
Phone:	(07) 3308 5200 Fax: (07) 3308 5201
Website:	www.recochem.com.au


Emergency Telephone Numbers

Business Hours:	(07) 3308 5200
After Hours:	1300 131 001
Poisons Information:	Australia: 13 11 26 New Zealand: 0800 764 766

SECTION 2 HAZARDS IDENTIFICATION

Hazardous chemical	<i>according to classification by Safe Work Australia</i>
Non-dangerous goods	<i>according to the Australian Code for the Transport of Dangerous Goods by Road and Rail</i>

Signal Word	WARNING
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Hazardous chemical classification	Pictogram	Hazard statement
Acute Toxicity - Oral, Category 4	 EXCLAMATION MARK	H302 Harmful if swallowed

Precautionary statements:

GENERAL	
P101	If medical advice is needed, have product container or label at hand
P102	Keep out of reach of children
P103	Read label before use
PREVENTATIVE	
P264	Wash thoroughly after handling
P270	Do not eat, drink or smoke when using this product

Product: MONO ETHYLENE GLYCOL

RESPONSE	
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330	Rinse mouth
DISPOSAL	
P501	Dispose of contents/container in accordance with local regulations

SECTION 3 COMPOSITION AND INFORMATION ON INGREDIENTS**Ingredients Names and Proportions**

Chemical Entity	CAS Number	Proportion (%)
Monoethylene Glycol	107-21-1	100

SECTION 4 FIRST AID MEASURES**Description of necessary first aid measures**

Inhalation:	Keep victim calm and remove to fresh air if safe to do so. If rapid recovery does not occur, transport to nearest medical facility for additional treatment
Skin Contact:	If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water and follow by washing with soap if available. If irritation persists, seek medical attention
Eye Contact:	If in eyes, hold eyes open, flood with water for at least 15 minutes. If irritation persists, seek medical attention
Ingestion:	If swallowed, do NOT induce vomiting. Have conscious person drink several glasses of water or milk. SEEK IMMEDIATE MEDICAL ATTENTION

Symptoms caused by exposure

Inhalation:	May include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing
Skin:	May include burning sensation, redness, swelling and/or blisters
Eye:	May include burning sensation, redness, swelling and/or blurred vision
Ingestion:	May include nausea, vomiting, abdominal cramps, diarrhoea, lumbar pain shortly after ingestion, and possibly narcosis and death. Kidney toxicity may be recognized by blood in the urine or increased or decreased urine flow

Medical attention and special treatment

Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES**Suitable extinguishing equipment**

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not use water in a jet.

Specific hazards arising from the chemical

Carbon dioxide and/or carbon monoxide may be evolved if incomplete combustion occurs. Material will not burn unless preheated. When heated to decomposition, emits acrid smoke and irritating fumes. Not a product presenting risks of explosion.

Special protective equipment and precautions for fire fighters

Wear full protective clothing and self-contained breathing apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with spilled or released material. Do NOT ingest. Shut off leaks, if possible without personal risks. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Remove all sources of ignition in the surrounding area. Ventilate contaminated area thoroughly.

Environmental precautions

Use appropriate containment to avoid environmental contamination. Prevent from spreading and entering waterways using sand, earth or other appropriate barriers.

Methods and materials for containment and cleaning up

For small spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

For larger spills (> 1 drum), transfer by means such as a vacuum truck to a salvage tank for recovery or disposal. Do not flush residues with water. Retain as contaminated waste. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Avoid breathing vapours. Do NOT ingest. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not eat, drink or smoke in contaminated areas. Handle and open containers with care in a well-ventilated area. Ensure that the workplace is ventilated such that the Occupational Exposure limit is not exceeded. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated area, away from sunlight, ignition sources and other sources of heat. Do not store near strong oxidisers.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure control measures

From National Occupational Health & Safety Commission (NOHSC) Worksafe Australia - Monoethylene glycol: 52mg/m³ (20ppm) TWA (vapour), 104mg/m³ (40ppm) STEL (vapour) and 10mg/m³ TWA (particulate)

Biological monitoring

No biological limit allocated.

Engineering controls

Ensure that adequate ventilation is provided. Maintain air concentrations below recommended exposure standards. Avoid generating and inhaling mists and vapours. Keep containers closed when not in use.

Individual protection measures

Eye and face protection:	Wear safety goggles.
Skin protection:	Use solvent resistant gloves, nitrile for longer term protection or PVC and neoprene for incidental splashes.
Respiratory protection:	If work practices do not maintain airborne level below the exposure standard, use appropriate respiratory protection equipment. When using respirators, select an appropriate combination of mask and filter. Select a filter for organic gases and vapours (boiling point > 65°C). Respirators should comply with AS1716 or an equivalent approved by a state/territory authority.
Thermal hazards:	Not applicable.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear colourless viscous liquid
Odour:	None
Odour threshold (ppm):	Data not available
pH:	7.5 - 8.5 (1% in water)
Melting point/freezing point (°C):	-13
Initial boiling point and boiling range (°C):	197
Flash point (°C):	116.1 (closed cup)
Evaporation rate (Butyl acetate = 1):	0.01
Flammability:	Combustible
Upper/lower flammability or explosive limits (%):	3.2 - 15.3
Vapour pressure (mmHg @ 20°C):	0.06
Vapour density (air = 1):	2.1
Density (g/ml @ 15°C):	1.115 - 1.125
Solubility:	Soluble in water, methanol, diethyl ether
Partition coefficient: n-octanol/water:	Data not available
Auto-ignition temperature (°C):	412
Decomposition temperature (°C):	Data not available
Kinematic viscosity (mm ² /s @ 20°C):	Data not available

SECTION 10 STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions of use.

Chemical stability

Stable under normal conditions of use.

Possibility of hazardous reactions

Stable under normal conditions of use.

Conditions to avoid

High temperatures.

Incompatible materials

Strong oxidising agents, strong acids, strong alkalis.

Hazardous decomposition products

Burning can produce carbon monoxide and/or carbon dioxide.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity:	Low toxicity in animals - LD50 Oral (rat) = 4700mg/kg LD50 Dermal (rabbit) = 9530mg/kg Note that there is a marked difference in acute oral toxicity between
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	animals and humans, humans being more susceptible than animals. The estimated fatal dose for humans is 100ml
Skin corrosion/irritation:	May cause skin irritation; prolonged contact may cause dermatitis
Serious eye damage/irritation:	May cause eye irritation
Respiratory or skin sensitisation:	Not expected to be a sensitiser
Germ cell mutagenicity:	No evidence of mutagenic activity
Carcinogenicity:	Not carcinogenic in animal studies
Reproductive toxicity:	Not expected to impair fertility
Specific Target Organ Toxicity (STOT) – single exposure:	May cause drowsiness or dizziness. Inhalation of vapours or mists may cause irritation to the lungs and respiratory system
Specific Target Organ Toxicity (STOT) – repeated exposure:	May cause damage to organs or organ systems through prolonged or repeated exposure. Toxic to liver and kidneys
Aspiration hazard:	Not considered an aspiration hazard

SECTION 12 ECOLOGICAL INFORMATION**Ecotoxicity**

Acute toxicity:

Fish –	Low toxicity: LC/EC/IC50 > 100mg/l
Aquatic invertebrate –	Low toxicity: LC/EC/IC50 > 100mg/l
Algae –	Low toxicity: LC/EC/IC50 > 100mg/l
Microorganisms –	Low toxicity: LC/EC/IC50 > 100mg/l

Chronic toxicity:

Fish –	NOEC/NOEL > 100mg/l
Aquatic invertebrate –	NOEC/NOEL > 100mg/l
Algae –	No data available
Microorganisms –	No data available

Persistence and degradability

Biodegradable.

Bioaccumulative potential

Does not bioaccumulate significantly.

Mobility in soil

Dissolves in water. If product enters soil, one or more constituents will be mobile and may contaminate groundwater.

Other adverse effects

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

Ensure waste disposal conforms to local waste disposal regulations.

SECTION 14 TRANSPORT INFORMATION

UN number:	Not applicable
Proper shipping name:	Not applicable
Australian Dangerous Goods class:	Not applicable
Australian Dangerous Goods packing group:	Not applicable
Hazchem code:	Not applicable

SECTION 15 REGULATORY INFORMATION

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP), Poisons Schedule:	6
Australian Inventory of Chemical Substances (AICS):	Listed
Dangerous Goods Initial Emergency Response Guide (SAA/SNZ HB76):	Not applicable

SECTION 16 OTHER INFORMATION

Date of preparation:	18/08/2015
Revision number:	5
Changes in this revision:	Poisons Schedule corrected

This MSDS summarises product safety information at the date of issue, to the best of our knowledge, as a general guide. Recochem cannot anticipate or control the conditions under which the product is used, so prior to usage each user must assess and control the risks associated with their use of the product. Users should also consult the relevant legislation governing the use and storage of this product. We make no warranties, express or implied, and assume no liability in connection with any use of information contained within this document. If clarification or further information is needed, the user should contact Recochem on (07) 3308 5200.
