



Material Safety Datasheet

Monoethylene Glycol (MEG)**1. DESCRIPTION****Trade Name:** Monoethylene Glycol (MEG)**Chemical Name:** MONOETHYLENE GLYCOL , Ethylene glycol; MEG; 1,2-Ethanediol; 1,2-Dihydroxyethane.**Application:** Coolant and antifreeze; heat transfer agent; brake fluids; solvent; humectant.**Supplier:** TEAM Chemicals**Telephone:** +44 (0)207 408 7700 - +98 912 3717539**Address:** No. 43, Souri St., 43 Ashrafi Esfahani Expressway**2. COMPOSITION / INFORMATION ON INGREDIENTS****Ingredients**

NAME	CAS RN	Content
Monoethylene Glycol	107-21-1	>99%

3. HAZARD IDENTIFICATION**EMERGENCY OVERVIEW:****Potential Acute Health Effects:** Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure.**Potential Chronic Health Effects:**

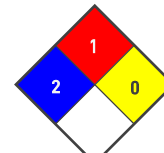
CARCINOGENIC EFFECTS: This material has been classified as non-hazardous.

MUTAGENIC EFFECTS: This material has been classified as non-hazardous.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

May cause damage to organs through prolonged or repeated exposure

Irritant YES **Flammable** NO**Carcinogenic** NO **Oxidant** NO**Explosive** NO **Environmental Hazard** NO**Corrosive** NO**(Risk-Phrases)** - **(Safety-Phrases)** -



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4. FIRST AID MEASURES

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes.

Skin Contact: If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.

Inhalation: Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen. Seek immediate medical advice.

Ingestion: DO NOT induce vomiting if swallowed. Danger of aspiration and development of chemical Pneumonia. Seek immediate medical advice. If person is fully conscious give 1 cup or 240 ml of water.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred.

FIRE FIGHTING Do not use direct water stream. May spread fire.

FIRE/EXPLOSION HAZARD During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Nitrogen oxides.

PERSONAL PROTECTION Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Small Spill: Clear area of all unprotected personnel. Shut off all possible sources of ignition. If contamination of sewers or waterways has occurred advise local emergency services.

Large Spill: Absorb with an inert material and put the spilled material in an appropriate. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapors. Work up wind or increase ventilation.



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Handling Precautions: Avoid contact with eyes. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage Precautions: Do not store near food, foodstuffs, drugs or potable water supplies. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ethylene glycol (vapour): 8hr TWA = 52 mg/m³ (20 ppm), 15 min STEL = 104 mg/m³ (40 ppm), Sk

Ethylene glycol (particulate): 8hr TWA = 10 mg/m³, SkTWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight-hour work day.

According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

`Sk' (skin) Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

Engineering Controls Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

Personal Protection Equipment:

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state and appearance: Clear Liquid

Odor: No specific odor

pH: NA

Specific Gravity: 1.1 @ 20°C

Relative Vapour Density (air=1): >1

Vapour Pressure (20 °C): 0.092 kPa @ 25°C

Flash Point (°C): 110

Flammability Limits (%): 3.2 - 15.3

Autoignition Temperature (°C): 412

Melting Point/Range (°C): -13

Boiling Point/Range (°C): 193

Viscosity: 21 cP @ 20--°C

Solubility: Miscible in water.



10. STABILITY & REACTIVITY

Chemical Stability: Stable under normal conditions

Conditions to Avoid: Incompatible materials (strong oxidizers), excess heat

Materials to Avoid: Reactive with oxidizing agents

Special Remarks on Reactivity: Reacts with strong oxidizing agents.

Special Remarks on Corrosivity: Non-corrosive in presence of glass.

11. TOXICOLOGICAL INFORMATION

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

LD50 oral rat: 8.54 g/kg

LD50 dermal rabbit: 10600 mg/kg

Skin corrosion/irritation : Not classified

Additional information : Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified

Additional information : Based on available data, the classification criteria are not met

Respiratory or skin sensitization : Not classified

12. ECOLOGICAL INFORMATION

Ecotoxicity: *Ecotoxicological information appears in this section when such data is available.*

Toxicity

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 72,860 mg/l, Other guidelines

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate inhibition, 6,500 - 13,000 mg/l, Other guidelines



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Monoethylene Glycol (MEG)**13. DISPOSAL CONSIDERATION****DISPOSAL METHODS:**

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT Not classified as Dangerous Goods by the criteria of the United Nations "Recommendations on the Transport of Dangerous Goods."

MARINE TRANSPORT Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Classification: This material is hazardous according to criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 7th edition.

Poisons Schedule (SUSMP): S6 Poison

16. ADDITIONAL INFORMATION

3 Yearly Revised Primary MSDS

Update in Toxicological Information

Update in Ecological Information

This MSDS summaries to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. TEAM cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.