

Mono Ethylene Glycol

Safety data sheet in the 16-section GHS format · CAS 107-21-1

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1. Identification of the substance and of the supplier

Product name	Mono Ethylene Glycol
Synonyms	MEG chemical, ethylene glycol, MEG fibre grade
C.A.S. number	107-21-1
Molecular formula	C ₂ H ₆ O ₂ (HOCH ₂ CH ₂ OH)
Grade supplied	99.9% MEG fibre grade
Product group	Solvents & Organic Chemicals
Identified uses	Polyester & PET, Coolants & antifreeze, Gas processing, Chillers & HVAC, Resins, Solvents
Supplier	Velora Chemicals Private Limited
Emergency contact	Medical, fire or spill emergency — call the emergency services first: 112 (all-India), 101 fire, 108 ambulance. Velora Chemicals Private Limited does not at present operate a 24-hour chemical emergency advice line, and this sheet does not pretend otherwise. Every consignment despatched by road carries an emergency information panel under rule 134 of the Central Motor Vehicles Rules 1989 bearing a number from which expert advice on this material can be obtained, and the producer's safety data sheet issued with the consignment carries the producer's own 24-hour number where one is operated. For product, grade and documentation queries in business hours: +91 99255 22674.

2. Hazards identification

GHS signal word	Warning
Hazard classification	Acute Tox. 4 (oral) - H302; STOT RE 2 (kidney) - H373. This is the EU harmonised CLP Annex VI classification for ethylene glycol and is what BASF applies on its producer SDS.

3. Composition / information on ingredients

Substance	Mono Ethylene Glycol
C.A.S. number	107-21-1
Molecular weight	62.07 g/mol (given as 62.1 on the ILO ICSC card)
Composition	99.9% MEG fibre grade

4. First-aid measures

Eye contact	Rinse immediately with plenty of water for at least 15 minutes, holding the eyelids apart; remove contact lenses if easy to do. Refer for medical attention if pain, blinking or redness persists.
Skin contact	Remove contaminated clothing. Wash the affected skin thoroughly with mild soap and plenty of water, then rinse with warm water. MEG is absorbed through the skin, so treat large-area or prolonged contact as a potential systemic exposure and get medical advice.

Inhalation	Move the person to fresh air, keep them calm and rest them in a position comfortable for breathing. Refer for medical attention if unwell. Vapour exposure is only a real hazard from heated or misted material.
Ingestion	Rinse the mouth. Do NOT induce vomiting. If the person is conscious, give 200-300 mL of water to drink. Call a poison centre or doctor IMMEDIATELY and tell them ethylene glycol has been swallowed, even if the person looks well - it is severely toxic by ingestion, the serious effects (metabolic acidosis and kidney failure) are delayed by hours, and there is specific antidotal treatment (fomepizole, or ethanol where fomepizole is unavailable) plus haemodialysis that must be started early to be effective. Transport to hospital without waiting for symptoms.
5. Fire-fighting measures	
Flash point	111 degC closed cup (BASF and ILO ICSC 0270); 115 degC open cup (ICSC). Combustible but NOT classified as a flammable liquid. Autoignition 398 degC.
Suitable extinguishing media	This material has a flash point and burns. Use alcohol-resistant foam, dry chemical powder or carbon dioxide; water spray or fog to cool surrounding surfaces and containers. Confirm the medium against the producer's safety data sheet for the grade supplied.
Unsuitable extinguishing media	Do not use a high-pressure water jet: it will spread the material and the fire. A vapour flash-back to the source and re-ignition of cooled but still-hot material are both foreseeable; do not approach a container that may be pressurised or a pool fire without cover.
Special hazards arising from the substance	Hazardous gases and decomposition products may be formed in a fire, from this substance or from its packaging and the materials stored with it. Packaging and pallets are themselves a substantial fire load.
Advice for fire-fighters	Fire-fighters must wear self-contained breathing apparatus and full protective clothing. Keep unnecessary personnel away and upwind. Prevent firefighting run-off from entering drains, surface water or groundwater.

6. Accidental release measures

Keep unnecessary personnel away and upwind, and ventilate. Wear the protective equipment in section 8 before approaching. Stop the leak if it is safe to do so, then bund or dike the spill and prevent entry to drains, surface water and groundwater. Absorb with an inert absorbent and collect into labelled, closable containers for disposal under section 13. Do not return spilled material to the original container.

7. Handling and storage

- MEG is hygroscopic and will absorb water from the air. In coolant and hydrate-inhibition duty the lean water content is what matters, so store closed and blanket the tank if the application is sensitive.
- It is toxic if swallowed and tastes sweet, which is why spills and unlabelled containers are genuinely dangerous around a plant. Label everything and clean up spills properly.
- Carbon steel is acceptable for industrial and coolant duty. Fibre-grade MEG is a different matter — store and transfer it in stainless (304 or 316), because carbon steel contributes iron and puts the material off specification on colour and UV transmittance, the exact parameters a polyester plant tests on receipt.

Storage: Store in sealed containers below 40 degC in a cool, dry, well ventilated place away from direct sunlight. Suitable materials: stainless steel, HDPE and high-purity polymer liners; keep the container tightly closed because the product is hygroscopic and will pick up water and degrade the assay. Nitrogen blanket for fibre-grade bulk storage to protect colour and UV transmittance. BASF states a maximum storage time of about 12 months. Segregate from oxidising agents, strong acids and strong bases. Provide floor-level ventilation - the vapour is heavier than air.

8. Exposure controls / personal protection

Engineering controls. Enclose every transfer, tipping, bag-slitting and sampling point and fit local exhaust extraction at each, and keep airborne concentrations below the limit in force at the place of use. Provide an eyewash within reach of the working position, and a safety shower wherever the material is classified corrosive or irritant or is handled in quantity. Do not eat, drink

or smoke in the handling area; wash before breaks. Where no limit is stated above, occupational exposure limits vary by jurisdiction: check the limit in force at the place of use and the producer's sheet for the grade supplied, and record which value your assessment adopted. Select eye, skin and respiratory protection on the strength of a measured or modelled exposure assessment, not on this sheet alone.

9. Physical and chemical properties

Appearance	Clear, colourless, odourless, viscous hygroscopic liquid with a sweet taste
Physical state	Liquid
Melting / freezing point	-13 degC (BASF MEG technical SDS and ILO ICSC 0270)
Boiling point	197.4 degC (BASF); 197 degC (ILO ICSC 0270)
Relative density	1.11 g/cm3 at 20 degC (BASF); relative density 1.1 (ILO ICSC 0270)
Solubility in water	Miscible with water in all proportions
pH	5.0 measured on a 500 g/kg (50% w/w) aqueous solution at 20 degC (BASF MEG technical SDS). Most SDS report 'no data' for the neat product, because pH is not a meaningful specification for it - fibre-grade MEG is controlled on acidity as mg KOH/g, not on pH. Always state the dilution if you publish a number.
Flash point	111 degC closed cup (BASF and ILO ICSC 0270); 115 degC open cup (ICSC). Combustible but NOT classified as a flammable liquid. Autoignition 398 degC.
Auto-ignition / ignition temperature	Not available
Explosive / dust-explosion properties	Not available
Vapour pressure	Not available
Vapour density	Not available
Partition coefficient (log Pow)	Not available
Particle characteristics	Not available
Molecular weight	62.07 g/mol (given as 62.1 on the ILO ICSC card)

10. Stability and reactivity

Incompatible materials	Strong oxidising agents (a violent reaction is possible), strong acids, strong bases, aldehydes, and acid chlorides/anhydrides. On combustion it forms toxic gases.
Conditions to avoid	Store in sealed containers below 40 degC in a cool, dry, well ventilated place away from direct sunlight. Suitable materials: stainless steel, HDPE and high-purity polymer liners; keep the container tightly closed because the product is hygroscopic and will pick up water and degrade the assay. Nitrogen blanket for fibre-grade bulk storage to protect colour and UV transmittance. BASF states a maximum storage time of about 12 months. Segregate from oxidising agents, strong acids and strong bases. Provide floor-level ventilation - the vapour is heavier than air.

11. Toxicological information

The health hazards classified for this substance are listed in section 2, and the corresponding first-aid measures in section 4. Numerical toxicological endpoints are not reproduced here: refer to the producer's safety data sheet for the grade supplied, and to the ECHA and PubChem entries for the substance.

12. Ecological information

Where section 2 or section 14 classifies this substance as hazardous to the aquatic environment, prevent any release to drains, surface water or groundwater and treat aqueous effluent before discharge. Otherwise, refer to the producer's sheet.

13. Disposal considerations

Dispose of the substance and its container through an authorised facility under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 where the waste is scheduled under those Rules, and otherwise as non-hazardous industrial waste, in each case under the conditions of the State Pollution Control Board consent in force at the site. Whether a particular waste stream is scheduled depends on the substance and on what it has been mixed with, so classify the waste before consigning it. Do not reuse empty containers for any other purpose.

14. Transport information

UN number	Not regulated for transport
Class	Not applicable - not classified as a dangerous good under ADR, RID, ADN, IMDG or IATA/ICAO (BASF producer SDS)
Packing group	Not applicable
Proper shipping name	Not applicable - not a dangerous good

15. Regulatory information

Supply in India is subject to the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 where the substance is scheduled, and to any product-specific licensing named on the product page. Classification and labelling follow the GHS as adopted in the jurisdiction of use.

Note: Two points a reader can be seriously misled by. First, the hazard profile is modest on the label (Warning, H302) but MEG is lethal in small ingested volumes and has a sweet taste with no deterrent, so it is a repeat cause of accidental and deliberate poisoning - the first-aid line above must not be shortened to generic 'rinse mouth, seek advice' wording, and the antidote point belongs on the SDS. Second, do NOT let mono ethylene glycol be confused or substituted with diethylene glycol (DEG, CAS 111-46-6). DEG contamination of glycerine and propylene glycol has caused mass fatalities in cough-syrup incidents, Indian suppliers are under specific regulatory scrutiny on this, and any customer supplying pharmaceutical or food chains needs identity plus DEG limit testing per lot. Also note 'fibre grade' (also sold as MEG-FG) is a purity/colour/UV grade for polyester and is the same substance and the same transport status as industrial grade - only the specification differs. MEG is combustible: above its 111 degC flash point, and as an airborne mist at any temperature, it can burn.

16. Other information

Version	1.0
Date of issue	07 October 2026
Supersedes	No previous version
Regulatory basis as at the date of issue	EU CLP Regulation 1272/2008 as amended, including Annex VI harmonised classifications; UN Model Regulations and the IMDG Code Amendment 42-24, mandatory from 1 January 2026; ADR 2025; and, in India, the Manufacture, Storage and Import of Hazardous Chemical Rules 1989 and the Central Motor Vehicles Rules 1989.

How this sheet was compiled and what governs. This sheet was prepared by Velora Chemicals Private Limited as the supplier, from PubChem, the ECHA CLP inventory including Annex VI harmonised classifications, ILO International Chemical Safety Cards and published producer safety data sheets. Values that could not be confirmed from those sources are shown as "Not available" rather than estimated. **The producer's safety data sheet for the specific grade and lot supplied is the governing document** and is issued with the consignment; where the two differ, the producer's sheet prevails. This sheet carries no warranty of the properties of any particular batch. Velora Chemicals Private Limited is a bulk supplier and trader, not a manufacturer.

Sources consulted: https://chemicalsafety.ilo.org/dyn/icsc/showcard.display?p_card_id=0270&p_version=2&p_lang=en; https://download.basf.com/p1/000000000030054147_SDS_GEN_00/en_UN/MONOETH._GLY._TECHN._30054147_SDS_GEN_00_en_8-0.pdf; <https://www.wessexchemicalfactors.co.uk/wp-content/uploads/2020/02/Monoethylene-Glycol-MEG-107-21-1.pdf>; <https://pubchem.ncbi.nlm.nih.gov/compound/174>