

Glycerine

Safety data sheet in the 16-section GHS format · CAS 56-81-5

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1. Identification of the substance and of the supplier

Product name	Glycerine
Synonyms	glycerin, glycerol, refined glycerine, pharmaceutical-grade glycerine
C.A.S. number	56-81-5 (EC 200-289-5)
Molecular formula	C ₃ H ₈ O ₃ (HOCH ₂ CH(OH)CH ₂ OH)
Grade supplied	99.5% refined (USP/IP on request)
Product group	Solvents & Organic Chemicals
Identified uses	Pharmaceuticals, Personal care, Resins & coatings, Industrial
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	Not classified
Hazard classification	Not classified. Glycerine is not classified as hazardous under CLP/GHS: the supplier SDS reviewed states 'Not classified' with no signal word, and the ILO ICSC card gives no GHS classification. There is no EU harmonised CLP Annex VI entry. This applies to refined glycerine; crude or unrefined glycerine (with residual methanol, salts and free fatty acids) is a different material and a supplier may classify it as hazardous.

3. Composition / information on ingredients

Substance	Glycerine
C.A.S. number	56-81-5 (EC 200-289-5)
Molecular weight	92.09 g/mol (given as 92.1 on the ILO ICSC card)
Composition	99.5% refined (USP/IP on request)

4. First-aid measures

Eye contact	Rinse with plenty of water for at least 15 minutes, lifting the upper and lower eyelids; remove contact lenses if easy to do. Consult a doctor if irritation persists. Glycerine is hygroscopic and can cause transient stinging and blurring.
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Skin contact	Wash the skin with soap and water and remove contaminated clothing. Seek medical advice if skin irritation or an allergic reaction develops. Glycerine is not a skin hazard in normal use.
Inhalation	Move the person to fresh air and let them rest. Inhalation is not a significant hazard for the liquid at ambient temperature. Heated glycerine gives off irritating acrolein fumes - in that case remove the person from exposure immediately and get medical attention.
Ingestion	Rinse the mouth with water and then give plenty of water to drink. Glycerine has a low acute oral toxicity, but get medical advice if a large quantity has been swallowed - it acts as an osmotic laxative and can cause dehydration, headache and, in quantity, haemolysis.
5. Fire-fighting measures	
Flash point	176 degC (ILO ICSC 0624); greater than 175 degC open cup (supplier SDS). Combustible, but not a flammable liquid. Autoignition 393 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, including respiratory protection, before approaching. Eliminate ignition sources and prohibit smoking before approaching. Avoid raising dust, and never blow a spilled powder down with compressed air. Dry-collect — vacuum with a HEPA-filtered unit, or sweep gently without raising dust — into labelled, closable containers for disposal under section 13. A spill inside a vessel, tank, silo, container or pit is a confined-space job: test the atmosphere and work under permit. A fine powder makes a floor slippery, especially once wet, so treat every wetted surface as slippery until it has been washed and dried. Prevent entry to drains, surface water and groundwater. Do not return spilled material to the original container; a damaged bag should be overpacked into a labelled outer rather than decanted into an unmarked one.

7. Handling and storage

- Glycerine is hygroscopic — it pulls water out of the air. Keep drums and IBCs closed between draws, or the assay you bought will slowly drift down.
- It thickens a great deal in cold weather. In winter, drums may need warming before they will pump — use a drum heater or warm room, never an open flame or live steam directly on the drum.
- Not classified as dangerous goods for transport, but keep it away from strong oxidisers such as potassium permanganate, chromic acid and nitric acid — mixtures can react violently.

Storage: Keep containers tightly closed in a dry, well ventilated place out of direct sunlight, in stainless steel, HDPE or lined mild steel. Glycerine is strongly hygroscopic - moisture pick-up lowers the assay, so keep drums and tanks sealed and nitrogen-blanket bulk storage for pharmacopoeial grades. Keep separated from strong oxidising agents. Store above about 18 degC, or provide heated/insulated/traced storage, if the material must stay pourable.

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, hygroscopic syrupy liquid with a sweet taste
Physical state	Liquid (sets to a soft solid in cold storage - see melting point)
Melting / freezing point	18 degC (ILO ICSC 0624); about 18 degC (supplier SDS). Refined glycerine will crystallise or go stiff in an unheated store in winter.
Boiling point	290 degC (ILO ICSC 0624 and supplier SDS). It decomposes at around the boiling point, forming acrolein.
Relative density	1.26 at 20 degC (ILO ICSC 0624 and supplier SDS)
Solubility in water	Miscible with water in all proportions; also miscible with ethanol; practically insoluble in hydrocarbons, fixed oils and chloroform
pH	pH 5-8 is quoted on a UK supplier SDS for glycerine, but that SDS does not state the dilution it refers to. Pure glycerine is essentially neutral, and pH is not a meaningful specification for the neat product - pharmacopoeial grades (USP/BP/Ph.Eur.) are controlled on acidity and alkalinity by titration, not by pH. Publish your own COA figure with its basis, or state that pH is not applicable.
Flash point	176 degC (ILO ICSC 0624); greater than 175 degC open cup (supplier SDS). Combustible, but not a flammable liquid. Autoignition 393 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	92.09 g/mol (given as 92.1 on the ILO ICSC card)

10. Stability and reactivity

Incompatible materials	Strong oxidising agents - potassium permanganate, chlorates, perchlorates, nitric acid, chromium trioxide and concentrated hydrogen peroxide; the reaction can be violent or can ignite, and glycerine/permanganate and glycerine/peroxide mixtures are classic spontaneous-ignition demonstrations. Also strong acids, strong alkalis, and acid chlorides/anhydrides. On heating it decomposes to corrosive, irritating acrolein fumes.
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Conditions to avoid	Keep containers tightly closed in a dry, well ventilated place out of direct sunlight, in stainless steel, HDPE or lined mild steel. Glycerine is strongly hygroscopic - moisture pick-up lowers the assay, so keep drums and tanks sealed and nitrogen-blanket bulk storage for pharmacopoeial grades. Keep separated from strong oxidising agents. Store above about 18 degC, or provide heated/insulated/traced storage, if the material must stay pourable.
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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 regulated under ADR, RID, IMDG or IATA (supplier 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: The safety profile is benign but the commercial and regulatory traps are serious. First, grade: '99.5% refined' is a technical purity statement and is NOT the same claim as USP, BP, Ph.Eur. or FCC compliance - a pharmaceutical, food or personal-care buyer needs the pharmacopoeial certificate, not just the assay. Second, and most important: diethylene glycol and ethylene glycol contamination of glycerine has repeatedly killed people, including children, in cough-syrup incidents, and Indian glycerine supply chains are under specific regulatory scrutiny for it. Identity testing plus DEG/EG limit testing on every received lot, with full traceability to the refiner, is not optional for any lot that could reach a pharmaceutical or food customer; never re-label drums on trust. Third, naming: glycerine, glycerin and glycerol are the same substance - glycerol is the chemical name, glycerine/glycerin the commercial one. Fourth, it solidifies below about 18 degC, which customers routinely report as 'the product has gone bad'. Fifth, although it is unclassified, it is combustible and reacts violently with oxidisers, so it should not be stored next to hydrogen peroxide, hypochlorite, permanganate or nitric acid - a genuine risk if all of these sit in the same warehouse.

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_lang=en&p_version=2&p_card_id=0624;
<https://www.nexchem.co.uk/wp-content/uploads/1970/01/Glycerine-3.pdf>; <https://pubchem.ncbi.nlm.nih.gov/compound/753>;
https://www.seroweb.com/fileadmin/data/content/downloads/safetydatasheets/en/Glycerine_99,5_en.pdf