

Order Number

Customer Number

1. Identification of the substance/preparation and of the company/undertaking

Product name : Glycerol
Catalog # : 356350
Chemical formula : C₃H₈O₃
Supplier : Manufactured by EMD Biosciences, Inc.
 10394 Pacific Center Court
 San Diego, CA 92121
 (858)450-5558/(800)854-3417
 FAX: (858)453-3552
Synonym : Glycerin

Emergency telephone number : Call Chemtrec®
 (800)424-9300 (within U.S.A.)
 (703)527-3887 (outside U.S.A.)

2. Composition / information on ingredients

Substance/Preparation : Substance

Chemical name*	CAS No.	EC Number	Symbol	R-Phrases
Glycerin	56-81-5	Not available.	-	-

3. Hazards identification

Physical/chemical hazards : Not applicable.
Human health hazards : No specific hazard.

4. First-aid measures

First-Aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
Skin Contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Eye Contact : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Aggravating conditions : Repeated or prolonged exposure is not known to aggravate medical condition.

5. Fire-fighting measures

Flammability of the Product : May be combustible at high temperature.

Extinguishing Media

Suitable : SMALL FIRE: Use DRY chemical powder.
 LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Hazardous thermal (de)composition products : These products are carbon oxides (CO, CO₂).

Special fire-fighting procedures : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

- Personal precautions**
- : Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
- Small Spill and Leak**
- : Absorb with an inert material and put the spilled material in an appropriate waste disposal.
- Large Spill and Leak**
- : Absorb with an inert material and put the spilled material in an appropriate waste disposal.

7. Handling and storage

- Handling**
- : Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, alkalis.
- Storage**
- : Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 20°C (68°F).
- Packaging materials**
- Recommended use**
- : Use original container.

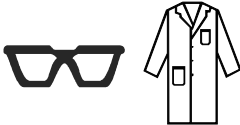
8. Exposure controls/personal protection

- Engineering measures**
- : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Hygiene measures**
- : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
Glycerol	Not available.

Personal protective equipment

- Skin and body**
- : Lab coat.
- Hands**
- : Natural, Neoprene, Nitrile gloves (8 hour breakthrough)
- Eyes**
- : Safety glasses.
- Protective Clothing (Pictograms)**
- :



9. Physical and chemical properties

- Physical state**
- : Liquid. (Viscous liquid.)
- Color**
- : Clear Colorless.
- Molecular Weight**
- : 92.1 g/mole
- Solubility**
- : Not available.
- Flash point**
- : OPEN CUP: 177°C (350.6°F).
- Explosive properties**
- : Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

10. Stability and reactivity

- Stability**
- : The product is stable.
- Conditions to avoid**
- : Incompatible with peroxides.
- Materials to avoid**
- : Reactive with oxidizing agents, alkalis.
- Hazardous Decomposition Products**
- : These products are carbon oxides (CO, CO2).

11. Toxicological information

- RTECS #**
- : MA8050000
- Local effects**
- Skin irritation**
- : Not available.
- Acute toxicity**
- : Acute oral toxicity (LD50): 12600 mg/kg [Rat].
- Chronic toxicity**
- : Repeated or prolonged exposure is not known to aggravate medical condition.
- Other Toxic Effects on Humans**
- : Not available.
Not considered to be toxic for humans.

Not available.

Not available.

Carcinogenic effects : Not available.

Mutagenic effects : Not available.

Reproduction toxicity : Not available.

Teratogenic effects : Not available.

12. Ecological information

Ecotoxicity : Not available.

Toxicity of the Products of Biodegradation : The product itself and its products of degradation are not toxic.

13. Disposal considerations

Methods of disposal; Waste of residues; Contaminated packaging : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

International transport regulations

Land - Road/Railway

ADR/RID Class : Not controlled under ADR (Europe).

Sea

IMDG Class : Not controlled under IMDG.

Air

IATA-DGR Class : Not controlled under IATA.

Special Provisions for Transport : Not applicable.

15. Regulatory information

EU Regulations

Risk Phrases : This product is not classified according to the EU regulations.

U.S. Federal Regulations

: TSCA: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
SARA 313 toxic chemical notification and release reporting: No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

HCS Classification : Not controlled under the HCS (United States).

State Regulations :

WHMIS (Canada) : Not controlled under WHMIS (Canada).
No products were found.

16. Other information

Hazardous Material Information System (U.S.A.)

Health	1
Fire Hazard	1
Reactivity	0
Personal Protection	A

National Fire Protection Association (U.S.A.)



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