

# SAFETY DATA SHEET



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## 24-Hour Emergency Number (CHEMTREC)

USA: 800-424-9300  
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All non-emergency numbers should be directed  
to Customer Service at 800-PURITY1

## GLYCEROL

SDS No. M0115

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Glycerol

Synonyms: 1,2,3-propanetriol; glycerin; glycol alcohol; glycerol, anhydrous

Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

### 2. HAZARDS IDENTIFICATION

#### **Label Elements**

Signal Word: Not a hazardous substance or mixture.

Hazard Statements:

Not a hazardous substance or mixture.

Precautionary Statements:

Not a hazardous substance or mixture.

#### **Emergency Overview**

May cause irritation to eyes, skin, and respiratory tract. Not expected to be hazardous in a normal industrial setting.

#### HMIS Rating:

Health – 1 Flammability – 1 Physical Hazard – 0 PPE – User supplied

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS No</u>	<u>Percent</u>	<u>Hazardous</u>
Glycerol	56-81-5	60-100%	Yes

### 4. FIRST-AID MEASURES

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion: **Do not** induce vomiting unless directed by medical personnel. If vomiting occurs naturally, have victim lean forward. If conscious and alert, give 2-3 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid if feeling unwell.

Skin Contact: Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation persists.

Clear focus. Consistent results. Complete confidence.

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if irritation persists.

**Notes to Physician:** Treat symptomatically and supportively.

## 5. FIRE FIGHTING MEASURES

**Flammability:** Low fire hazard

**Auto-ignition Temperature:** 400° C (752° F)

**Flash Point:** 193° C (379° F)

**Flammable Limits:** Not available

**Products of Combustion:** May decompose into irritating and highly toxic gases under fire conditions (carbon monoxide, carbon dioxide).

**Specific Fire Hazards:** As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear. Use water spray to keep fire exposed containers cool. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Vapors are heavier than air and can spread along the ground and collect in low or confined areas.

**Specific Explosion Hazards:** No information available.

**Fire Fighting Media:** Use water spray to cool fire exposed containers. Use agent most appropriate for extinguishing fire. Use dry chemical, carbon dioxide, water spray, or appropriate foam.

**National Fire Protective Association:** Health - 1, Flammability - 1, Reactivity - 0

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

## 6. ACCIDENTAL RELEASE MEASURES

Absorb spilled liquid with sorbent pads, socks, or other inert material such as vermiculite, sand, or earth. Use spark-proof tools. Provide ventilation to the affected area and remove all ignition sources. Approach the spill from upwind and pick up absorbed material and place it in a suitable container. Always use proper personal protective equipment as described in section 8.

## 7. HANDLING AND STORAGE

**Precautions:** Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Empty containers contain product residue (liquid and vapor) and can be dangerous. Use with adequate ventilation. Avoid breathing vapor or mist.

**Storage:** Keep in a tightly closed container. Store in a cool and dry area. Product is a combustible liquid.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or using the material should be equipped with eyewash station and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protection:** Wear protective chemical goggles or other appropriate eye protection. Use butyl rubber gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**Exposure Limits:**

ACGIH – 10 mg/m<sup>3</sup> TWA

NIOSH – None

OSHA Final PELs – 15 mg/m<sup>3</sup> TWA (total); 5 mg/m<sup>3</sup> TWA (respirable fraction);

OSHA Vacated PELs: 10 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Clear, colorless liquid.

Odor: Faint odor

Molecular Formula: HOCH<sub>2</sub>CH(OH)CH<sub>2</sub>OH

Molecular Weight: 92.09

Auto-ignition Temperature: 400° C (752° F)

Flash Point: 193° C (379° F)

Flammable Limits: Not available

pH: Not available

Boiling Point: 290° C @ 760 mm Hg

Freezing/Melting Point: -6.7° C

Decomposition Temperature: 290° C

Specific Gravity: 1.4746 g/cm<sup>3</sup>

Vapor Density (Water=1): 3.17

Vapor Pressure: 0.003 mbar @ 20° C.

Evaporation Rate (Butyl acetate = 1): Not available.

Viscosity: Not available.

Solubility: Miscible in water. Insoluble in chloroform.

Conductivity (25°C): Conductive; Conductivity = 6.4x10<sup>6</sup> pS/m; Dielectric Constant = 42.5; Relaxation Time Constant = 5.9x10<sup>-5</sup> seconds

## 10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Incompatible materials, ignition sources, excess heat.

Incompatibility with Various Substances: Not available.

Hazardous Decomposition Products: Irritating and toxic fumes and gases, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

## 11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, skin absorption, skin contact

Acute Exposure Hazards:

INHALATION HAZARD: Low hazard in a normal industrial setting. Inhalation of mist may cause respiratory tract irritation.

INGESTION HAZARD: Ingestion of large amounts may cause gastrointestinal irritation. Low hazard in a normal industrial setting. May cause headache.

SKIN CONTACT HAZARD: May cause skin irritation. Not expected to be hazardous in a normal industrial setting.

EYE CONTACT HAZARD: May cause eye irritation.

Chronic Exposure Hazards: No information found.

Animal Toxicity:

Draize test, rabbit, eye: 126 mg Mild

Draize test, rabbit, eye: 500 mg/24H Mild

Draize test, rabbit, skin: 500 mg/24H Mild

Inhalation, rat: LC50 = > 500 mg/m<sup>3</sup>/1H;

Oral, mouse: LD50 = 4090 mg/kg;

Oral, rabbit: LD50 = 27 g/kg;

Oral, rat: LD50 = 12,600 mg/kg;

Skin, rabbit: LD50 = >10 mg/kg;

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Epidemiology: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies: No information available.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: LC50, 96H, Rainbow trout = 50-67 mg/L; 12 degrees CLC50 (96H) goldfish = >5000 mg/L.

Environmental Fate: No information available.

## 13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use, or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. TRANSPORT INFORMATION

Not regulated for transportation.

## 15. REGULATORY INFORMATION

### US Federal Regulations:

CERCLA Hazardous Substances: CAS# 56-81-5 does not have an RQ

SARA Section 302: Does not have a TPQ

SARA Codes: CAS# 56-81-5 – delayed

Section 313: Glycerol (56-81-5) is not subject to SARA Title III requirements.

OSHA: Not considered highly hazardous by OSHA.

### US State Regulations:

CAS# 56-81-5 is on the following state right-to-know lists: Pennsylvania, Minnesota, and Massachusetts

California Prop 65: This product contains no chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

## 16. OTHER INFORMATION

Originally Prepared: 1/1/2006

Last Revised: 11/05/2020 – Updated GHS information.

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