Chemical Safety Data: Glycerol

Common Synonyms
1,2,3-propanetriol, glycerine, glycerin, glycyl alcohol, glycerol USP

Formula
C3H8O3

Physical Properties
Form: Viscous colourless liquid
Stability: Stable
Melting point: 17.8 C
Boiling point: 290 C
Specific gravity: 1.26
Flash point: 160 C
Critical temperature: 492.2 C
Critical pressure: 42.5 atm

Principal Hazards
Glycerol is generally regarded as a safe material for which no special handling precautions are required. However, it is flammable. It also feels oily, so may be a slipping hazard if spilled on the floor.

Safe Handling
Wear safety glasses if required by local rules. Clear up spills promptly.

Emergency
Eye contact: Immediately flush the eye with water. If irritation persists, call for medical help.
Skin contact: Wash off with water.
If swallowed: Call for medical help if the amount swallowed is large. Glycerol is widely used in foods, so accidental consumption of a small amount is unlikely to be harmful.

Disposal
Small amounts of glycerol may be flushed down the sink unless local rules prohibit this. Glycerol is viscous, so unless care is taken to wash all liquid away, some may remain in the sink and pose a fire risk.

Protective Equipment
Safety glasses if required by local rules.

Further Information
Glycerol
Chemicals in the HSci database
More extensive safety data
Section 1 - Product and Company Information

Product Name: MISSION SHRNA BACTERIAL GLYCEROL STOCK
Product Number: SHGLY
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index Number</th>
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<tbody>
<tr>
<td>MISSION SHRNA BACTERIAL GLYCEROL STOCK</td>
<td>None</td>
<td>No</td>
<td></td>
<td></td>
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<tr>
<td>Ingredient Name</td>
<td>CAS #</td>
<td>Percent</td>
<td>SARA 313</td>
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<tr>
<td>GLYCEROL</td>
<td>56-81-5</td>
<td>&lt;= 10.000 %</td>
<td>No</td>
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</tbody>
</table>

Formula
Synonyms

Section 3 - Hazards Identification

Emergency Overview
Caution: Avoid contact and inhalation. Target organ(s): Kidneys.

HMIS Rating
Health: 1*
Flammability: 0
Reactivity: 0

NFPA Rating
Health: 1
Flammability: 0
Reactivity: 0

*additional chronic hazards present.
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media
Suitable
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage
Suitable
Keep tightly closed. Store at -20°C

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory
Government approved respirator.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.
Skin-Specific
Chemical resistant apron.
**General Hygiene Measures**
Wash thoroughly after handling. Wash contaminated clothing before reuse.

**Section 9 - Physical/Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance Physical State</td>
<td>Liquid</td>
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<tr>
<td>Molecular Weight:</td>
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<tr>
<td>pH</td>
<td>N/A</td>
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<tr>
<td>BP/BP Range</td>
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<tr>
<td>MP/MP Range</td>
<td>N/A</td>
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<tr>
<td>Freezing Point</td>
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<tr>
<td>Vapor Pressure</td>
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<tr>
<td>Vapor Density</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
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<tr>
<td>Bulk Density</td>
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<td>Odor Threshold</td>
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<td>Volatile%</td>
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<td>VOC Content</td>
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<td>Water Content</td>
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<tr>
<td>Solvent Content</td>
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<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Partition Coefficient</td>
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<tr>
<td>Decomposition Temp.</td>
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<tr>
<td>Flash Point °F</td>
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<tr>
<td>Flash Point °C</td>
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<tr>
<td>Explosion Limits</td>
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<td>Flammability</td>
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<tr>
<td>Autoignition Temp</td>
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</tr>
<tr>
<td>Solubility</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A = not available

**Section 10 - Stability and Reactivity**

**Stability**
- Stable

**Materials to Avoid**
- Strong oxidizing agents.

**Hazardous Decomposition Products**
- **Hazardous Decomposition Products**
  - Nature of decomposition products not known.
Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.

Skin Absorption
May be harmful if absorbed through the skin.

Eye Contact
May cause eye irritation.

Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion
May be harmful if swallowed.

Target Organ(s) or System(s)
Kidneys.

Signs and Symptoms of Exposure
Prolonged exposure can cause: Nausea, headache, and vomiting.

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

US Classification and Label Text
US Statements
Caution: Avoid contact and inhalation. Target organ(s): Kidneys.

United States Regulatory Information
SARA Listed: No

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.