1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**
- **Product Name**: VYCERIN™ GL99 Glycerine

**Other means of identification**
- **Product Code**: GL99
- **Synonyms**: 1,2,3-propanetriol

**Recommended use of the chemical and restrictions on use**
- **Recommended Use**: Multi-purpose fluid.
- **Uses advised against**: None

**Details of the supplier of the safety data sheet**
- **Manufacturer Address**: Vantage Oleochemicals, South Racine Avenue, IL 60609 USA
- **Emergency Telephone Number**
  - **Company Phone Number**: +1-773-376-9000
  - **Emergency Telephone Number**: Chemtrec US 1-800-424-9300 CHEMTREC International +1-703-527-3887

2. HAZARDS IDENTIFICATION

**Classification**
- This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard.
- This is not a dangerous substance or mixture according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

**Label Elements**

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical State</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear</td>
<td>Liquid</td>
<td>Odorless</td>
</tr>
</tbody>
</table>
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>56-81-5</td>
<td>99.5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

FIRST AID MEASURES

Eye contact  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician if irritation occurs.

Skin contact 
Wash exposed skin with soap and plenty of water. Consult a physician if irritation occurs.

Inhalation 
Remove to fresh air and keep at rest in a position comfortable for breathing. Consult a physician if breathing is difficult or other respiratory symptoms develop.

Ingestion 
DO NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects, both acute and delayed
Symptoms  
None identified.

Indication of any immediate medical attention and special treatment needed
Notes to Physician  
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media  
None identified.

Specific hazards arising from the chemical  
None identified.

Hazardous combustion products  
Acrolein may be formed if product is burned or strongly heated, especially in acidic conditions.

Explosion Data  
Sensitivity to Mechanical Impact  
None.

Sensitivity to Static Discharge  
None.

Protective equipment and precautions for firefighters  
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal Precautions  
Use personal protective equipment.

Environmental precautions
Environmental precautions  
Prevent release to surface water.
Methods for Cleaning Up
Absorb with an inert material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid generation of mist/aerosol.

Conditions for safe storage, including any incompatibilities

Storage
Keep container tightly closed in a dry and well-ventilated place.

Packaging Material
Store tightly closed in original container. Prevent exposure to high humidity, material is hygroscopic.

Incompatible materials
Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin 56-81-5</td>
<td>n/a</td>
<td>TWA: 15 mg/m³ (total)</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 5 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Measures
Provide showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face Protection
Safety glasses with side-shields.

Skin and Body Protection
Impervious gloves.

Respiratory Protection
Use NIOSH/MSHA approved respirator if exposure limit is exceeded.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7</td>
<td>Neat</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>18 °C / 64 °F</td>
<td>Solidifies at much lower temperature</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>290 °C / 554 °F</td>
<td>atmospheric pressure</td>
</tr>
<tr>
<td>Flash Point</td>
<td>177 °C / 351 °F</td>
<td>Open cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>May burn if exposed to open flames</td>
<td>-</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limits</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.0000106</td>
<td>hPa at (20 °C)</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Not reactive

Chemical stability
Stable under normal conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
None known.

Incompatible materials
Strong oxidizing agents.

Hazardous Decomposition Products
Acrolein may be formed if product is burned or strongly heated, especially in acidic conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
This substance does not present an acute toxicity hazard based on published data.

Inhalation
Inhalation of aerosol or mist may cause irritation of the respiratory tract.

Eye contact
Not irritating to eyes.

Skin contact
Not irritating to skin.

Ingestion
Ingestion may cause stomach discomfort.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>56-81-5</td>
<td>&gt; 4,000 mg/kg (Mouse), &gt;25,000 mg/kg (rat)</td>
<td>&gt; 18,700 mg/kg (Rabbit)</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
Not irritating to skin.

Serious eye damage/eye irritation
Not irritating to eyes.

Sensitization
Not a skin sensitizer.
12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Microtox</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>LC50 (96 hr) &gt;5 g/l fish</td>
<td>Pseudomonas putida (16 hr) &gt;10 g/l</td>
<td>EC50 &gt;10,000 mg/l 24 h Daphnia magna</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
Readily biodegradable.

Bioaccumulation/Accumulation
Not expected to be bioaccumulative.

Mobility
Will likely be mobile in the environment due to its water solubility.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>-1.76</td>
</tr>
</tbody>
</table>

Other Adverse Effects
None identified

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method
Dispose of in accordance with local regulations.

Contaminated Packaging
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT
Not regulated

ICAO
Not regulated

IATA
Not regulated

IMDG / IMO
Not regulated

Special Provisions
-
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend

- TSCA: United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL: Canadian Domestic/Substances List/Non-Domestic Substances List
- EINECS/ELINCS: European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- ENCS: Japan Existing and New Chemical Substances
- KECL: China Inventory of Existing Chemical Substances
- PICCS: Philippines Inventory of Chemicals and Chemical Substances
- AICS: Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td></td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td></td>
</tr>
<tr>
<td>Fire hazard</td>
<td></td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td></td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td></td>
</tr>
</tbody>
</table>

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

U.S. State Regulations

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin 56-81-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>
End of MSDS