Dear Customer,

This File Contains Both The ANSI Material Safety Data Sheet and The GHS Safety Data Sheet For The Same Product

Spectrum is currently transitioning all chemical product labeling from the ANSI\textsuperscript{1} format to the GHS\textsuperscript{2} format (see note below). In order to ensure that you receive complete labeling during the transition, we have included both the ANSI MSDS and the GHS SDS in a single file. The ANSI MSDS is given first, followed by the GHS SDS. Please use whichever matches the container label.

Why It Matters:

The complete precautionary labeling for this chemical consists of BOTH the label on the container AND the matching Material Safety Data Sheet (for ANSI labels) or Safety Data Sheet (for GHS labels). Both elements of the labeling (Label + (M)SDS) are written to be read and understood together, so as to provide complete precautionary information. It is intended for you to read and understood BOTH before handling or using the chemical.

Picking the Right One: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

1) GHS labels: any pictogram displayed in the upper left-hand corner will be inside a red diamond. ANSI labels: pictograms, if present, will be inside individual black boxes.

2) GHS labels: on the bottom of the right-hand panel of the label, locate the Lot Number. Directly to the left will be a string of control characters, followed by a single letter. For GHS labels, the string of characters will end in "GHS."
Sincerely,

Regulatory Affairs

\(^1\) American National Standards Institute
\(^2\) Globally Harmonized System for Hazard Communication
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Product code:** G1015  
**Product Name:** GLYCERIN, SYNTHETIC, USP, EP, BP, JP  
**Chemical Name:** Glycerol  
**Synonyms:**  
- 1,2,3-Propanetriol  
- 1,2,3-Trihydroxypropane  
- Glycerin mist  
- Glycerin, anhydrous  
- Glycerin, synthetic  
- Glycerine  
- Glicerol  
- Glycyl alcohol  
- Grocolene  
- Osmoglym  
- Synthetic glycerin  
- Trihydroxypropane  
- glicerina (Spanish)  
- glycérine (French)  

**CAS #:** 56-81-5  
**RTECS #:** MA8050000  
**Formula:** C3-H8-O3  
**CI#:** Not available  
**Supplier:** Spectrum Chemicals and Laboratory Products, Inc.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000  
**Order Online At:** [https://www.spectrumchemical.com](https://www.spectrumchemical.com)  
**Emergency Telephone Number:** CHEMTREC: 1-800-424-9300  
**Contact Person:**  
- Regina Wachenheim (East Coast)  
- Martin LaBenz (West Coast)

See Section 8.
2. HAZARDS IDENTIFICATION

|------------|-------------------------|-------------------------------|-------------------------|

OSHA Regulatory Status
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 1910.1200)

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:
Skin. Ingestion. Eyes.

Acute Potential Health Effects:

Skin Contact:
May cause skin irritation. Mild skin irritation. It may be absorbed through the skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Eye Contact:
Contact with eyes may cause irritation. Mild eye irritation. Symptoms may include stinging, tearing, redness.

Inhalation:
May cause irritation of respiratory tract.

Ingestion:
Expected to be a low hazard for usual industrial handling. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhoea. May cause central nervous system effects. May affect the liver. It may affect the kidneys. May affect the blood.

Chronic Potential Health Effects:

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Target Organs: No information available

Mutagenic Effects: May affect genetic material
Experiments with human lymphocytes have shown mutagenic effects

Teratogenic Effects: No information available

Aggravated Medical Conditions: No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

Product code: G1015
Product name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>56-81-5</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General Advice: Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Notes to Physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties

<table>
<thead>
<tr>
<th>Flashpoint (°C/°F):</th>
<th>177°C/350.6 °F</th>
</tr>
</thead>
</table>

Flash Point Tested according to:
Open cup
Closed cup

<table>
<thead>
<tr>
<th>Lower Explosion Limit (%)</th>
<th>No information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Explosion Limit (%)</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Autoignition Temperature (°C/°F): 370-392 °C/698-739 °F

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Hazardous Combustion Products: Carbon monoxide; Carbon dioxide

Specific hazards: May be combustible at high temperatures
May be ignited by heat, sparks or flames
Container explosion may occur under fire conditions or when heated

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Specific Methods: No information available.
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition.

Environmental Precautions:
No information available.

Methods for Cleaning Up:
Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice:
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Storage

Technical Measures/Storage Conditions:
Hygroscopic. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Personal Protective Equipment

Eye protection:  Goggles. Safety glasses with side-shields.

Skin and body protection:  Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection:  Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

National occupational exposure limits

United States
U.S Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Components</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin - 56-81-5</td>
<td>15 mg/m³ TWA</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Canada
Canada Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Components</th>
<th>Alberta</th>
<th>British Columbia</th>
<th>Ontario</th>
<th>Quebec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin 56-81-5</td>
<td>10 mg/m³ TWA</td>
<td>10 mg/m³ TWA</td>
<td>3 mg/m³ TWA respirable</td>
<td>10 mg/m³ TWA mist</td>
</tr>
</tbody>
</table>

Australia and Mexico
Occupational Exposure Limits for Australia and Mexico:

<table>
<thead>
<tr>
<th>Components</th>
<th>Australia</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin 56-81-5</td>
<td>10 mg/m³ TWA</td>
<td>10 mg/m³ TWA</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid.

**Odor:** Mild.

**Flash point (**°C**):** 160

**Autoignition Temperature (**°C/**°F**):** 370-392 °C/698-739 °F

**pH:** No information available

**Decomposition temperature(**°C/**°F**):** No information available

**Evaporation rate:** No information available

**Odor threshold (ppm):** No information available

**Appearance:** Viscous. Syrupy.

**Molecular/Formula weight:** 92.09

**Lower Explosion Limit (%):** No information available

**Melting point/range(**°C/**°F**):** 19-20 °C/66.2-68 °F

**Specific gravity:** 1.2613-1.2636 @ 20 °C

**Bulk density:** No information available

**Vapor pressure @ 20°C (kPa):** 0

**Partition coefficient (n-octanol/water):** No information available

**Solubility:** Freely soluble in water
Insoluble in Benzene
Insoluble in Chloroform
Insoluble in Carbon disulfide
Insoluble in Carbon tetrachloride
Insoluble in Petroleum ether

**Color:** Clear. Colorless.

**Taste:** Sweet.

**Upper Explosion Limit (%):** No information available

**Boiling point/range(**°C/**°F**):** 290 °C/554 °F

**Density (g/cm³):** No information available

**VOC content (g/L):** No information available

**Miscibility:** No information available

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions

Conditions to avoid: Heat. Ignition sources. Exposure to moist air. Exposure to moisture.


Hazardous decomposition products: Carbon monoxide. Carbon dioxide.

Possibility of Hazardous Reactions: It can react vigorously, violently or explosively with oxidizers.
Glycerin is incompatible with strong oxidizers such as chromium trioxide, potassium chlorate, or potassium permanganate and may explode on contact.
Explosive glyceryl nitrate is formed from a mixture of glycerin and nitric and sulfuric acids.
When Perchloric acid and Lead oxide are mixed with glycerin, perchloric esters are formed, which may be explosive.
Glycerin and chlorine may explode if heated and confined.
Glycerin may react violently with acetic anhydride, aniline, nitrobenzene, chromic oxide, lead oxide, fluorine, phosphorous triiodide, ethylene oxide, silver perchlorate, sodium peroxide, and sodium hydride.

Polymerization: Hazardous polymerisation does not occur

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Glycerin - 56-81-5

LD50/oral/rat = 12600 mg/kg Oral LD50 Rat
LD50/oral/mouse = 4090 mg/kg
LD50/dermal/rat = > 21900 mg/kg Dermal LD50 Rat
LD50/dermal/rabbit = 10 g/kg Dermal LD50 Rabbit
LC50/inhalation/rat = 570 mg/m³ Inhalation LC50 Rat 1 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 27 gm/kg LD50 oral Rabbit

Product Information

LC50/inhalation/rat > 570 mg/m³ Inhalation 1 h
LC50/Inhalation/mouse No information available
LD50/dermal/rabbit > 10000mg/kg
LD50/dermal/rat > 21900 mg/kg/kg
LD50/oral/mouse = 4090 mg/kg/kg
LD50/oral/rat = 12600 mg/kg/kg

Local Effects

Skin irritation: May cause skin irritation. Mild skin irritation.

Eye irritation: Contact with eyes may cause irritation. Mild eye irritation. Symptoms may include stinging, tearing, redness.

Product code: G1015

Product name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP
Inhalation: May cause irritation of respiratory tract. This material has a very low vapor pressure. Not expected to be an inhalation hazard for normal handling. If the product is misted or heated, the Inhalation of mist or vapor can cause respiratory tract irritation.

Ingestion: Low hazard. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May cause dehydration. May cause thirst. May cause hyperglycemia. May affect liver. It may affect behavior/central nervous system (excitement, depression, general anesthetic, headache, dizziness, convulsions, confusion, insomnia, muscle weakness). It may affect behavior/central nervous system (drowsiness). May affect blood (changes in serum composition).

Sensitization: No information available

Chronic Toxicity

Chronic Toxicity Prolonged or repeated ingestion may affect the blood (changes in white blood cell count). Prolonged or repeated ingestion may affect the blood (changes in serum composition). Chronic ingestion of Glycerin may increase blood serum glyceride concentration. Prolonged or repeated ingestion may affect the kidneys. Prolonged or repeated ingestion may affect the liver.

Carcinogenic effects: Not considered carcinogenic

<table>
<thead>
<tr>
<th>Components</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA HCS - Carcinogens</th>
<th>ACGIH - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects: May affect genetic material
Experiments with human lymphocytes have shown mutagenic effects

Reproductive Effects: The Registry of Toxic Effects of Chemical Substances (RTECS) notes reproductive effects data for animal studies on male rats and monkeys (paternal effects: spermatogenesis (including sperm morphology, motility, and count), testes, epididymis, sperm duct). However, the route of exposure was intratesticular (injection into the testicles), which is not a route of exposure for normal handling. The REPROTOX data base notes that when given orally to male rats, glycerin had no effect on fertility. The Teratogen Information System also notes that no teratogenic effect was observed among offspring of mice, rats, or rabbits given large oral doses of glycerin during pregnancy. Increased rates of embryonic and fetal death were only seen when pregnant rabbits were give glycerin intravenously, which is not a route of exposure for normal handling.

Teratogenic Effects: No information available
Target Organs: No information available

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals: Information given is based on data on the components and the ecotoxicology of similar products

Ecotoxicity effects: Aquatic environment.

Aquatic toxicity:

*Glycerin - 56-81-5*

**Freshwater Fish Species Data:** 51 - 57 mL/L LC50 Oncorhynchus mykiss 96 h static 1

**Water Flea Data:** 500 mg/L EC50 Daphnia magna 24 h

Mobility: No information available

Persistence and degradability: No information available

Bioaccumulative potential: No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste from residues / unused products:**
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**
Empty containers should be taken for local recycling, recovery or waste disposal

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

### 14. TRANSPORT INFORMATION

**DOT**

- **UN-No:** Not regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** None
- **Subsidiary Risk:** Not applicable
- **Marine Pollutant:** No data available
- **ERG No:** No information available
- **DOT RQ (lbs):** No information available

**TDG (Canada)**

- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** No information available
- **Subsidiary Risk:** No information available
- **Description:** No information available

**ADR**

- **UN-No:** No information available
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** No information available
- **Subsidiary Risk:** No information available
- **Classification Code:** No information available
- **Description:** No information available
- **CEFIC Tremcard No:** No information available

**IMO / IMDG**

- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available

**Product code:** G1015  **Product name:** GLYCERIN, SYNTHETIC, USP, EP, BP, JP
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
MFAG: No information available
Maximum Quantity: No information available

RID
UN-No: No information available
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available

ICAO
UN-No: No information available
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

IATA
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>Philippines (PICCS)</th>
<th>KOREA KECL</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Present</td>
<td>Present</td>
<td>Present KE-29297</td>
<td>Present (2)-242</td>
<td>Present</td>
<td>Present</td>
<td>Present 200-289-5</td>
</tr>
</tbody>
</table>

U.S. Regulations

Glycerin

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: Present
Pennsylvania RTK: Present
RI RTK - Hazardous Substances List: Present
Minnesota - Hazardous Substance List: Present


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Product code: G1015
Product name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP
<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
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</tbody>
</table>

**CERCLA/SARA**

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**U.S. TSCA**

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**Canada**

**WHMIS hazard class:**
Non-controlled

**Glycerin**

Uncontrolled product according to WHMIS classification criteria

**Canada Controlled Products Regulation:**
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

**Inventory**

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Present</td>
<td>Not Listed</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**EU Classification**

**R-phrase(s)**
not determined

**S -phrase(s)**
none

<table>
<thead>
<tr>
<th>Components</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td></td>
<td>No information</td>
<td></td>
</tr>
</tbody>
</table>

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Product code:** G1015  
**Product name:** GLYCERIN, SYNTHETIC, USP, EP, BP, JP
Indication of danger:
Not dangerous

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1/Z129.1-2010 standards.

Preparation Date: 22-Jan-2014

Reason for revision: Not applicable

Prepared by: Sonia Owen

Literature reference: No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

Product code: G1015  
Product name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP
SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier
Product code: G1015
Product Name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP

Other means of identification
Synonyms:
1,2,3-Propanetriol
1,2,3-Trihydroxypropane
Glycerin mist
Glycerin, anhydrous
Glycerin, synthetic
Glycerine
Glyceritol
Glycyl alcohol
Grocolene
Osmoglyn
Synthetic glycerin
Trihydroxypropane
glicerina (Spanish)
glycérine (French)

CAS #: 56-81-5
RTECS #: MA8050000
CI#: Not available

Recommended use of the chemical and restrictions on use
Uses advised against: No information available

Supplier:
Spectrum Chemicals and Laboratory Products, Inc.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com

Emergency telephone number
Chemtrec 1-800-424-9300

Contact Person:
Martin LaBenz (West Coast)
Regina Wachenheim (East Coast)

2. HAZARDS IDENTIFICATION

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation
Category 2B

Product code: G1015
Product name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP


**Label elements**

**Warning**

**Hazard statements**
Causes eye irritation

**Hazards not otherwise classified (HNOC)**
Not Applicable

**Other hazards**
Causes mild skin irritation

**Precautionary Statements - Prevention**
Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>56-81-5</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**First aid measures**

**General Advice:** Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)

**Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.

**Eye Contact:** Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

**Most important symptoms and effects, both acute and delayed**


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

**Protection of first-aiders**
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

Product code: G1015
Product name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP
5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon monoxide; Carbon dioxide

Specific hazards: May be combustible at high temperatures. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment 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: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition.

Environmental precautions: Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment: Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth).

Methods for cleaning up: Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Incompatible Materials:

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**National occupational exposure limits**

**U.S Occupational Exposure Limits:**

<table>
<thead>
<tr>
<th>Components</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
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<tr>
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<td>15 mg/m³ TWA</td>
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<td>None</td>
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</table>

**Canada**

**Canada Occupational Exposure Limits:**

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<thead>
<tr>
<th>Components</th>
<th>Alberta</th>
<th>British Columbia</th>
<th>Ontario</th>
<th>Quebec</th>
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<tbody>
<tr>
<td>Glycerin - 56-81-5</td>
<td>10 mg/m³ TWA</td>
<td>10 mg/m³ TWA</td>
<td>10 mg/m³ TWA</td>
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<tr>
<td>Glycerin - 56-81-5</td>
<td>3 mg/m³ TWA respirable</td>
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**Australia and Mexico**

**Occupational Exposure Limits for Australia and Mexico:**

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<thead>
<tr>
<th>Components</th>
<th>Australia</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin 56-81-5</td>
<td>10 mg/m³ TWA</td>
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</tr>
</tbody>
</table>

**Appropriate engineering controls**

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

**Individual protection measures, such as personal protective equipment**

**Personal Protective Equipment**

**Eye protection:** Goggles. Safety glasses with side-shields.

**Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.

**Respiratory protection:** Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

### 9. PHYSICAL AND CHEMICAL PROPERTIES
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<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Appearance:</th>
<th>Color:</th>
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<table>
<thead>
<tr>
<th>Odor:</th>
<th>Taste</th>
<th>Formula:</th>
</tr>
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<tbody>
<tr>
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<td>Sweet.</td>
<td>C3-H8-O3</td>
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<table>
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<th>Flashpoint (°C/°F):</th>
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<th>Upper Explosion Limit (%):</th>
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<td>290 °C/554 °F</td>
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### 10. STABILITY AND REACTIVITY

**Reactivity**
- Reactive with oxidizing agents
- Reactive with acids
- It can react vigorously, violently or explosively with oxidizers
- Glycerin is incompatible with strong oxidizers such as chromium trioxide, potassium chlorate, or potassium permanganate and may explode on contact
- Explosive glyceryl nitrate is formed from a mixture of glycerin and nitric and sulfuric acids
- When Perchloric acid and Lead oxide are mixed with glycerin, perchloric esters are formed, which may be explosive
- Glycerin and chlorine may explode if heated and confined
- Glycerin may react violently with acetic anhydride, aniline, nitrobenzene, chromic oxide, lead oxide, fluorine, phosphorous triiodide, ethylene oxide, silver perchlorate, sodium peroxide, and sodium hydride

**Chemical stability**
- Stable at normal conditions

**Stability:**
- Stable at normal conditions

**Possibility of Hazardous Reactions:**
- Hazardous polymerization does not occur

**Conditions to avoid:**

**Incompatible Materials:**
Hazardous decomposition products: Carbon monoxide. Carbon dioxide.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Skin. Ingestion. Eyes.

Acute Toxicity

Component Information

Glycerin - 56-81-5
LD50/oral/rat = 12600 mg/kg Oral LD50 Rat
LD50/oral/mouse = 4090 mg/kg
LD50/dermal/rabbit = 10 g/kg Dermal LD50 Rabbit
LD50/dermal/rat = > 21900 mg/kg Dermal LD50 Rat
LC50/inhalation/rat = 570 mg/m³ Inhalation LC50 Rat 1 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 27 gm/kg LD50 oral Rabbit

Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = 12600mg/kg

LD50/oral/mouse = Value - Acute Tox Oral = 4090mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = >10000mg/kg

LD50/dermal/rat
VALUE - Acute Tox Dermal = > 21900mg/kg

LC50/inhalation/rat
VALUE-Vapor = > 570mg/m³ (1-hr)
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation. Mild skin irritation. It may be absorbed through the skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Eye Contact: Contact with eyes may cause irritation. Mild eye irritation. Symptoms may include stinging, tearing, redness.

Inhalation: May cause irritation of respiratory tract. This material has a very low vapor pressure. Not expected to be an inhalation hazard for normal handling. If the product is misted or heated, the Inhalation of mist or vapor can cause respiratory tract irritation.

Ingestion: Low hazard. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May cause dehydration. May cause thirst. May cause hyperglycemia. May affect liver. It may affect behavior/central nervous system (excitement, depression, general anesthetic, headache, dizziness, convulsions, confusion, insomnia, muscle weakness). It may affect behavior/central nervous system (drowsiness). May affect blood (changes in serum composition).

Aspiration hazard: No information available

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

Chronic Toxicity: Prolonged or repeated ingestion may affect the blood (changes in white blood cell count). Prolonged or repeated ingestion may affect the blood (changes in serum composition). Chronic ingestion of Glycerin may increase blood serum glyceride concentration. Prolonged or repeated ingestion may affect the kidneys. Prolonged or repeated ingestion may affect the liver.

Sensitization: No information available

Mutagenic Effects: May affect genetic material. Experiments with human lymphocytes have shown mutagenic effects

Carcinogenic effects: Not considered carcinogenic

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<tr>
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<th>IARC</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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Reproductive toxicity: No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure: No information available

STOT - repeated exposure: No information available

Target Organs: No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.
Glycerin - 56-81-5

Persistence and degradability:  No information available
Bioaccumulative potential:  No information available
Mobility:  No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

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<td>Glycerin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

UN-No:  Not regulated
Proper Shipping Name:  No information available
Hazard Class:  No information available
Subsidiary Risk:  Not applicable
Packing Group:  None
Marine Pollutant:  No data available
ERG No:  No information available
DOT RQ (lbs):  No information available

TDG (Canada)

UN-No:  Not Regulated
Proper Shipping Name:  No information available
Hazard Class:  No information available
Subsidiary Risk:  No information available
Packing Group:  No information available
Description:  No information available

ADR

UN-No:  Not Regulated
Proper Shipping Name:  No information available
Hazard Class:  No information available
Packing Group:  No information available
Subsidiary Risk:  No information available
Classification Code:  No information available
Description:  No information available
CEFIC Tremcard No:  No information available

### 14. TRANSPORT INFORMATION

**IMO / IMDG**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available
- **IMDG Page:** No information available
- **Marine Pollutant:** No information available
- **MFAG:** No information available
- **Maximum Quantity:** No information available

**RID**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Classification Code:** No information available
- **Description:** No information available

**ICAO**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available

**IATA**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available

### 15. REGULATORY INFORMATION

#### International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>Philippines (PICCS)</th>
<th>KOREA KECL</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Present</td>
<td>Present</td>
<td>KE-29297</td>
<td>Present (2)-242</td>
<td>Present</td>
<td>Present</td>
<td>Present 200-289-5</td>
</tr>
</tbody>
</table>

#### U.S. Regulations

**Glycerin**
- **Massachusetts RTK:** Present
- **New Jersey RTK Hazardous Substance List:** Present
- **Pennsylvania RTK:** Present
- **RI RTK - Hazardous Substances List:** Present
- **Minnesota - Hazardous Substance List:** Present
- **FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 182.90 21 CFR 182.1320

**California Prop. 65:** Safe Drinking Water and Toxic Enforcement Act of 1986.

**Product code:** G1015  
**Product name:** GLYCERIN, SYNTHETIC, USP, EP, BP, JP
Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
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</tbody>
</table>

CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</table>

U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Canada

WHMIS hazard class:
Non-controlled

Glycerin
Uncontrolled product according to WHMIS classification criteria

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Present</td>
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</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Manditory Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

EU Classification

R-phrase(s)
not determined

S-phrase(s)
none

<table>
<thead>
<tr>
<th>Components</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td></td>
<td></td>
<td>No information</td>
</tr>
</tbody>
</table>
The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Not dangerous

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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</tr>
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<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Preparation Date: 1/22/2014
Revision Date: 1/22/2014
Prepared by: Sonia Owen

Disclaimer:
All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

See Section 8.

End of Material Safety Data Sheet

Product code: G1015
Product name: GLYCERIN, SYNTHETIC, USP, EP, BP, JP