

## SAFETY DATA SHEET

Preparation Date: 1/22/2014

Revision Date: 7/5/2018

Revision Number: G3

### 1. IDENTIFICATION

**Product identifier**

**Product code:** G3235  
**Product Name:** GLYCERIN, ELECTROPHORESIS GRADE

**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 #** MA805000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Solvent. Cosmetics. Lubricant. Soaps. In Foods.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 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)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

|                                   |             |
|-----------------------------------|-------------|
| Serious eye damage/eye irritation | Category 2B |
|-----------------------------------|-------------|

## 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**

| <b>Components</b> | <b>CAS-No.</b> | <b>Weight %</b> |
|-------------------|----------------|-----------------|
| Glycerin          | 56-81-5        | 100             |

## **4. FIRST AID MEASURES**

### **First aid measures**

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops.
- Eye Contact:** Flush eyes 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**

- Symptoms**
- Mild eye irritation
  - Mild skin irritation
  - Central nervous system effects
  - Headache
  - Drowsiness
  - Nausea
  - Vomiting
  - Dehydration
  - Thirst

**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.

**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**

**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:**

- Oxidizing agents
- Acids
- Acid anhydrides
- Aniline
- Nitrobenzene

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**National occupational exposure limits**

**United States**

| Components | CAS-No. | OSHA  | NIOSH | ACGIH | AIHA WEEL |
|------------|---------|---|-------|-------|-----------|
| Glycerin   | 56-81-5 | 15 mg/m <sup>3</sup> TWA<br>5 mg/m <sup>3</sup> TWA | None  | None  | None      |

**Canada**

| Components | CAS-No. | Canada - Alberta         | Canada - British Columbia                                      | Canada - Ontario | Canada - Quebec |
|------------|---------|--------------------------|--|------------------|-----------------|
| Glycerin   | 56-81-5 | 10 mg/m <sup>3</sup> TWA | 10 mg/m <sup>3</sup> TWA<br>3 mg/m <sup>3</sup> TWA respirable | None             | None            |

**Australia and Mexico**

| Components | CAS-No. | Australia                | Mexico                   |
|------------|---------|--------------------------|--------------------------|
| Glycerin   | 56-81-5 | 10 mg/m <sup>3</sup> TWA | 10 mg/m <sup>3</sup> TWA |

**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

**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

|   |  |  |
|---|--|--|
| <b>Physical state:</b><br>Liquid                                  | <b>Appearance:</b><br>Viscous. Syrupy.   | <b>Color:</b><br>Clear. Colorless.                                   |
| <b>Odor:</b><br>Mild (Slight).                                    | <b>Taste:</b><br>Sweet.  | <b>Formula:</b><br>C3-H8-O3  |
| <b>Molecular/Formula weight (g/mole):</b><br>92.09                | <b>Flammability:</b><br>No information available   | <b>Flashpoint (°C/°F):</b><br>177°C/350.6 °F<br>160 °C/320 °F        |
| <b>Flash Point Tested according to:</b><br>Open cup<br>Closed cup | <b>Autoignition Temperature (°C/°F):</b><br>370-392 °C/698-739 °F  | <b>Lower Explosion Limit (%):</b><br>No information available        |
| <b>Upper Explosion Limit (%):</b><br>No information available     | <b>Melting point/range(°C/°F):</b><br>19-20 °C/66.2-68 °F  | <b>Decomposition temperature(°C/°F):</b><br>No information available |
| <b>Boiling point/range(°C/°F):</b><br>290 °C/554 °F               | <b>Bulk density:</b><br>No information available   | <b>Density (g/cm3):</b><br>No information available                  |
| <b>Specific gravity:</b><br>1.2613-1.2636 @ 20 °C                 | <b>pH:</b><br>No information available   | <b>Vapor pressure @ 20°C (kPa):</b><br>0                             |
| <b>Evaporation rate:</b><br>No information available              | <b>Vapor density:</b><br>3.17  | <b>VOC content (g/L):</b><br>No information available                |
| <b>Odor threshold (ppm):</b><br>No information available          | <b>Partition coefficient (n-octanol/water):</b><br>-1.76   | <b>Viscosity:</b><br>No information available                        |
| <b>Miscibility:</b><br>No information available                   | <b>Solubility:</b><br>Freely soluble in water<br>Insoluble in Benzene<br>Insoluble in Chloroform<br>Insoluble in Carbon disulfide<br>Insoluble in Carbon tetrachloride<br>Insoluble in Petroleum ether |  |

## 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

**Stability:** Stable under recommended storage conditions.

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

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

**Incompatible Materials:** Oxidizing agents  
Acids  
Acid anhydrides  
Aniline  
Nitrobenzene

**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        |
| CAS-No. 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 LD50Rabbit

**LD50/dermal/rat** = No information available

**LC50/inhalation/rat** = >570 mg/m<sup>3</sup> Inhalation LC50 Rat 1 h

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50information** = 27 gm/kg LD50 oral Rabbit

#### **Product Information**

**LD50/oral/rat** =

**VALUE- Acute Tox Oral** = 12600 mg/kg

**LD50/oral/mouse** =

**Value - Acute Tox Oral** = 4090 mg/kg

**LD50/dermal/rabbit**

**VALUE-Acute Tox Dermal** = > 10000 mg/kg

**LD50/dermal/rat**

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VALUE -Acute Tox Dermal = > 21900 mg/kg

**LC50/inhalation/rat**

VALUE-Vapor = > 570 mg/m<sup>3</sup> (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 diarrhea. 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/seizures, 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.

| Components | CAS-No. | IARC       | ACGIH - Carcinogens | NTP        | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|------------|---------|------------|---------------------|------------|------------------------|--|--|
| Glycerin   | 56-81-5 | Not listed | Not listed          | Not listed | Not listed             | Not listed                                     | Not listed                                     |

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

**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*

**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

**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

| Components | CAS-No. | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|------------|---------|------------------------|------------------------|------------------------|------------------------|
| Glycerin   | 56-81-5 | None                   | None                   | None                   | None                   |

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No:** Not Regulated

**Proper Shipping Name:** No information available

**Hazard Class:** No information available

**Subsidiary Class** No information available

**Packing group:** No information available

**Emergency Response Guide Number** No information available

**Marine Pollutant** No data available

**DOT RQ (lbs):** No information available



**Special Provisions** No Information available  
**Symbol(s):** No information available  
**Description:** 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  
**Marine Pollutant Description:** No Information available  
 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

**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  
**Marine Pollutant** 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

**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

**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  
**ERG Code:** No information available  
**Special Provisions** No information available

**15. REGULATORY INFORMATION**

**International Inventories**

| Components      | CAS-No. | U.S. TSCA      | KOREA KECL       | Philippines (PICCS) | Japan ENCS      | CHINA   | Australia (AICS) | EINECS-No.        |
|-----------------|---------|----------------|------------------|---------------------|-----------------|---------|------------------|-------------------|
| <i>Glycerin</i> | 56-81-5 | PresentACTIV E | Present KE-29297 | Present             | Present (2)-242 | Present | Present          | Present 200-289-5 |

## U.S. Regulations

### Glycerin

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 3319

Pennsylvania RTK: Present

Minnesota - Hazardous Substance List: Present

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 182.90, 21 CFR 182.1320

FDA - Direct Food Additives 21 CFR 172.866 (synthetic Glycerin produced by the hydrogenolysis of Carbohydrates)

FDA - 21 CFR - Total Food Additives 169.175, 172.811, 175.300, 175.320, 176.210, 177.1390, 177.2420, 177.2800, 178.3500, 182.1320, 182.90; 172.866, 178.3500 (synthetic)

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

#### 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)

| Components | CAS-No. | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|------------|---------|------------|------------------------|----------------------------|-------------------------------|
| Glycerin   | 56-81-5 | Not Listed | Not Listed             | Not Listed                 | Not Listed                    |

### CERCLA/SARA

| Components | CAS-No. | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|------------|---------|---|---|--|---------------------------------|------------------------------------|
| Glycerin   | 56-81-5 | None  | None  | None   | None                            | None                               |

### U.S. TSCA

| Components | CAS-No. | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|------------|---------|---|--|
| Glycerin   | 56-81-5 | Not Applicable  | Not Applicable                         |

### Canada

#### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: Not a dangerous product according to HPR classification criteria.

Component  
Glycerin  
56-81-5 ( 100 )

WHMIS 2015 Hazard Classification  
Not a dangerous product according to HPR classification criteria

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

#### WHMIS 1988 Hazard Class

Non-controlled

Components  
Glycerin

WHMIS 1988  
Uncontrolled product according to WHMIS classification criteria

Product code: G3235

Product name: GLYCERIN,  
ELECTROPHORESIS GRADE

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**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**

| Components | CAS-No. | Canada (DSL) | Canada (NDSL) |
|------------|---------|--------------|---------------|
| Glycerin   | 56-81-5 | Present      | Not Listed    |

| Components | CAS-No. | CEPA Schedule I - Toxic Substances                          |
|------------|---------|---|
| Glycerin   | 56-81-5 | Not listed  |
| Components | CAS-No. | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Glycerin   | 56-81-5 | Not listed  |

**EU Classification****EU GHS - SV - CLP 1272/2008**

| Components | CAS-No. | EU GHS - SV - CLP (1272/2008) |
|------------|---------|-------------------------------|
| Glycerin   | 56-81-5 |                               |

**EU - CLP (1272/2008)****R-phrase(s)**

not determined (not applicable)

**S -phrase(s)**

none

| Components | CAS-No. | Classification | Concentration Limits: | Safety Phrases |
|------------|---------|----------------|-----------------------|----------------|
| Glycerin   | 56-81-5 |                | No information        |                |

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

**Indication of danger:**

Not dangerous

**16. OTHER INFORMATION**

**Preparation Date:** 1/22/2014  
**Revision Date:** 7/5/2018  
**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.

**End of Safety Data Sheet**