

SAFETY DATA SHEET

Preparation Date: 2/26/2014

Revision Date: 7/5/2018

Revision Number: G3

1. IDENTIFICATION

Product identifier

Product code: G1589
Product Name: Glycerin, Natural, USP

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

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

| Components | CAS-No. | Weight % |
|------------|---------|----------|
| 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 ³ TWA 5 mg/m ³ TWA | None | None | None |

Canada

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

Australia and Mexico

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

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

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/m³ 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
VALUE -Acute Tox Dermal = > 21900 mg/kg

LC50/inhalation/rat
VALUE-Vapor = > 570 mg/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 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)**OSHA (Occupational Safety and Health Administration of the US Department of Labor)***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

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 | Present ACTIV 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 |
|-------------------------------|---|

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: 2/26/2014
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