SDS

# Safety Data Sheet

## 1. IDENTIFICATION

**Product Identifier:** **Glycerin**

**Product Code(s):** NC-0484, G1008, G1011, G1012

**Synonyms:** Glycerine; Glycerol; 1,2,3-Propanetriol

**Recommended Use:** For manufacturing, industrial, and laboratory use only.

**Uses Advised Against:** Not for household use.

**Supplier:** The Science Company
7625 W. Hampden Ave #14 Lakewood CO 80227
Phone: (303) 777-3777 Fax: (303) 777-3331

**Emergency Phone Number:** For health emergency call Poison Control: (800) 222-1222.

## 2. HAZARDS IDENTIFICATION

**Hazard Classifications:** This product is classified as not hazardous under OSHA's Hazard Communication Standard, 29 CFR 1910.1200 (HCS). However, all chemicals handled and used in the workplace should be treated with caution.

**Signal Word:** Not applicable.

**Hazard Statements:** Not applicable.

**Pictograms:** Not applicable.

**Precautionary Statements:**

**Prevention:** Not applicable.

**Response:** Not applicable.

**Storage:** Not applicable.

**Disposal:** Not applicable.

**Hazards Not Otherwise Classified:** May cause skin sensitization.

**Toxicity Statement:** Not applicable.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Component | Common Name / Synonyms | CAS# | Chemical Formula | % by Weight |
|---|---|---|---|---|
| Glycerin | Glycerine, Glycerol | 56-81-5 | $C_3H_8O_3$ | ≥ 99.5 |

**Trade Secret Statement:** Not applicable.

## 4. FIRST AID MEASURES

**First Aid Procedures:**

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

**Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center if symptoms occur.

**Skin Contact:** Wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.

**Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if symptoms occur.

**General Advice:** Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves.

**Symptoms and Effects:** May cause irritation if swallowed, inhaled, or exposed to the skin or eyes. Exposure to skin may cause allergic reaction.

**Immediate Medical Care/ Special Treatment:** Not expected to be harmful. Treat symptomatically.

## 5. FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Water spray, dry powder, alcohol resistant foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream, as it may scatter and spread fire.

**Hazardous Combustion Products:** Carbon oxides.

**Specific Hazards:** Combustible if exposed to heat or flames.

**Special Protective Equipment/ Precautions for Firefighters:** As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. Use water spray to cool unopened containers. Move containers from fire area, if you can do so without risk. In the event of fire and/or explosion, do not breathe fumes.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions and Protective Equipment:** Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or mists.

**Emergency Procedures:** In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

**Methods for Containment:** Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Keep sources of ignition away from spilled materials. Product should not be released to the environment. Contain and recover liquid when possible.

**Methods for Cleanup:** Keep sources of ignition away from spilled material. Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

## 7. HANDLING AND STORAGE

**Handling:** Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work areas. Avoid contact with skin, eyes, clothing, and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Observe all warnings and precautions listed for this product.

**Storage:** Store in a cool, dry, ventilated area. Keep away from heat and sources of ignition. Store away from incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal feed. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Limits:**
OSHA (TWA): 15 $mg/m^3$
ACGIH (TLV): 10 $mg/m^3$

**Engineering Controls:** Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal Protective Measures:**

**Eye/Face Protection:** Wear safety glasses with side shields or safety goggles. Maintain approved eye wash station and accessible rinse facilities in work area.

**Skin Protection:** Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

**Respiratory Protection:** An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to

exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

**Specific Requirements for Personal Protective Equipment:** Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

*Unless otherwise indicated, all properties are given at 25 °C and standard pressure.*

| | |
|---|---|
| **Appearance:** | Colorless, transparent, viscous liquid. |
| **Odor:** | Odorless. |
| **Odor Threshold:** | No information found. |
| **Formula Weight:** | 92.09 |
| **pH:** | No information found. |
| **Melting/Freezing Point:** | 17.9 °C |
| **Boiling Point/Range:** | 290 °C |
| **Decomposition Temperature:** | No information found. |
| **Flash Point:** | 160 °C closed cup |
| **Auto-ignition Temperature:** | 370 °C |
| **Flammability:** | Combustible. |
| **Flammability/Explosive Limits:** | Lower: 2.7% v/v<br>Upper: 12.9% v/v |
| **Solubility:** | Miscible with water. |
| **Vapor Pressure:** | 0.0025 mmHg at 50 °C |
| **Vapor Density:** | 3.2 (Air = 1) |
| **Specific Gravity:** | 1.260 (Water = 1) |
| **Evaporation Rate:** | No information found. |
| **Viscosity:** | No information found. |
| **Partition Coefficient (n-octanol/water):** | -1.75 |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Reactivity Data:** | Combustible. See Section 9. |
| **Chemical Stability:** | Stable under normal conditions. Hygroscopic. |
| **Conditions to Avoid:** | Heat, flame, sparks, moisture, incompatible materials. |
| **Incompatible Materials:** | Oxidizing agents, strong bases. |
| **Hazardous Decomposition Products:** | Carbon oxides. |

**Possibility of Hazardous Reactions:** May react vigorously, violently, or explosively if exposed to extreme thermal conditions or to the incompatible materials listed above.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Inhalation, ingestion, skin contact, eye contact.

**Acute Effects:** May cause irritation if swallowed, inhaled, absorbed through the skin, or exposed to the eyes.

**Chronic Effects:** Prolonged or repeated exposure may cause reproductive effects and mutagenic effects.

**Toxicological Data:** $LD_{50}$ Oral, Rat: 12,600 mg/kg
$LD_{50}$ Dermal, Rabbit: > 10,000 mg/kg
Causes mild skin and eye irritation based on animal data.

**Symptoms of Exposure:** Irritation, nausea, vomiting, headache.

**Carcinogenic Effects:** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Data:** No information found.

**Persistence and Degradability:** Expected to be readily biodegradable and unlikely to bioaccumulate.

**Environmental Effects:** Not expected to be hazardous to the environment. However, the possibility of an environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Partition Coefficient (n-octanol/water): -1.75

## 13. DISPOSAL INFORMATION

**Disposal Instructions:** Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers. All wastes must be handled in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Because emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

**Waste Codes:** No information found.

## 14. TRANSPORT INFORMATION

**DOT:** Not regulated.

**Environmental Hazard Regulations:** No information found.

**Other Transport Precautions:** No information found.

## 15. REGULATORY INFORMATION

**U.S. Federal Regulations**:

**OSHA:** This product is not considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Inventory:** All components of this product are on the U.S. TSCA Inventory.

**U.S. EPCRA (SARA Title III):**

**Section 302:** Not applicable.

**Sections 311/312:**

| Hazard Category | List (Yes/No) |
|---|---|
| Section 311 – Hazardous Chemical | No |
| Immediate Hazard | No |
| Delayed Hazard | No |
| Fire Hazard | No |
| Pressure Hazard | No |
| Reactivity Hazard | No |

**Section 313:** Not applicable.

**CERCLA Reportable Quantities:** Not applicable.

**International Inventories:**

| Country or Region | Inventory Name | On Inventory (Yes/No)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

## 16. OTHER INFORMATION

**Disclaimer:** The Science Company provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. The Science Company makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, The Science Company assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

**Issue Date:** October 9, 2019

**Reason for Revision:** Update of product code information in Section 1 and property conditions in Section 9. Supersedes 05/08/2015 version.