



# PURITAN PRODUCTS

Effective Date: 03/29/16

Replaces Revision: 05/01/13, 07/05/11

NON-EMERGENCY TELEPHONE  
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE  
800-424-9300

## SDS – SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** GLYCEROL

**Synonyms:** 1,2,3 – Propanetriol, Glycerin, Glycol alcohol, Glycerol Anhydrous

**Chemical Formula:** C<sub>3</sub>H<sub>5</sub>(OH)<sub>3</sub>

**Recommended Use of the Chemical and Restrictions On Use:** Laboratory Reagent

**Manufacturer / Supplier:** Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

**Emergency Phone Number:** 24-Hour Chemtrec Emergency Telephone 800-424-9300

### 2. Hazard(s) Identification

**Classification of the Substance or Mixture:**

Skin irritation (Category 3)

Eye irritation (Category 2B)

**Risk Phrases:**

R36/R38: Irritating to eyes and skin.

**Label Elements:**

**Trade Name:** GLYCEROL

**Signal Word:** Warning

**Pictogram:** None

**Hazard Statements:**

H316: Causes mild skin irritation.

H320: Causes eye irritation.

**Precautionary Statements:**

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 3. Composition / Information on Ingredients

**CAS Number:** 56-81-5

**EC Number:** 200-289-5

**Molecular Weight:** 92.10 g/mol

| Ingredient | CAS Number | EC Number | Percent  | Hazardous | Chemical Characterization |
|------------|------------|-----------|----------|-----------|---------------------------|
| Glycerin   | 56-81-5    | 200-289-5 | 1 - 100% | No        | Substance                 |
| Water      | 7732-18-5  | 231-791-2 | 0 - 99%  | No        | Substance                 |

#### 4. First-aid Measures

**Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. Inhalation:** Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:** Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:** DO NOT INDUCE VOMITING unless directed by a physician! Never give anything by mouth to an unconscious person. Get medical attention.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

#### 5. Fire-fighting Measures

**Fire:** Slight fire hazard when exposed to heat or flame. Flash point: 199C (390F) CC / Autoignition temperature: 370C (698F)

**Explosion:** Above flash point, vapor-air mixtures may cause flash fire.

**Fire Extinguishing Media:** Use any means suitable for extinguishing surrounding fire. Water spray may be used to extinguish surrounding fire and cool exposed containers. Water spray will also reduce fume and irritant gases.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

#### 6. Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**Environmental Precautions and Methods and Materials for Containment and Cleaning Up:** Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

#### 7. Handling and Storage

**Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities:** Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product.

#### 8. Exposure Controls / Personal Protection

**Airborne Exposure Limits:**

For Glycerin Mist:

OSHA Permissible Exposure Limit (PEL): Total Dust: 15 mg/m<sup>3</sup> (TWA); Respirable Fraction: 5 mg/m<sup>3</sup>(TWA).

ACGIH Threshold Limit Value (TLV): 10 mg/m<sup>3</sup>

**Ventilation System:** A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):** If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type P95 or R95 filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece particulate respirator (NIOSH type P100 or R100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. Please note that N filters are not recommended for this material. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

**Skin Protection:** Wear protective gloves and clean body-covering clothing.

**Eye Protection:** Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

**Note:** Properties listed below are representative of anhydrous glycerin.

**Appearance:** Clear oily liquid

**Odor:** Odorless

**Odor Threshold:** Not applicable

**pH:** (neutral to litmus)

**% Volatiles by volume @ 21C (70F):** 0

**Melting Point:** 18C (64F)

**Boiling Point / Boiling Range:** 290C (554F)

**Flash Point:** 199C (390F) CC

**Evaporation Rate (BuAc=1):** No data available

**Flammability:** Slight fire hazard when exposed to heat or flame

**Upper / Lower Flammability or Explosive Limits:** No data available

**Vapor Pressure (mm Hg):** 0.0025 @ 50C (122F)

**Vapor Density (Air=1):** 3.17

**Relative Density:** 1.25 g/mL

**Solubility:** Soluble

**Partition Coefficient: n-octanol / water:** No data available

**Auto-ignition Temperature:** 370C (698F)

**Decomposition Temperature:** 290C (554F)

**Viscosity:** No data available

## 10. Stability and Reactivity

**Reactivity and / or Chemical Stability:** Stable under ordinary use and storage conditions.

**Possibility of Hazardous Reactions and Conditions to Avoid:** Heat, flames, ignition sources and incompatibles.

**Incompatible Materials:** Strong oxidizers. Can react violently with Acetic Anhydride, Calcium Oxychloride, Chromium oxides and alkali metal hydrides.

**Hazardous Decomposition Products:** Toxic gases and vapors may be released if involved in a fire. Glycerin decomposes upon heating above 290C, forming corrosive gas (acrolein.)

## 11. Toxicological Information

**Emergency Overview:** CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY AFFECT KIDNEYS.

### Potential Health Effects:

**Inhalation:** Due to the low vapor pressure, inhalation of the vapors at room temperatures is unlikely. Inhalation of mist may cause irritation of respiratory tract.

**Ingestion:** Low toxicity. May cause nausea, headache, diarrhea.

**Skin Contact:** May cause irritation.

**Eye Contact:** May cause irritation.

**Chronic Exposure:** May cause kidney injury.

**Aggravation of Pre-existing Conditions:** Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance.

**Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:)** No data available.

**Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:)** No data available.

**Numerical Measures of Toxicity:** Cancer Lists: NTP Carcinogen

| Ingredient         | Known | Anticipated | IARC Category |
|--------------------|-------|-------------|---------------|
| Glycerin (56-81-5) | No    | No          | None          |
| Water (7732-18-5)  | No    | No          | None          |

**Acute Toxicity:** Oral rat LD50: 12,600 mg/kg. Investigated as a mutagen, reproductive effector.

## 12. Ecological Information

**Ecotoxicity:** This material is not expected to be toxic to aquatic life.

**Persistence and Degradability:** When released into the soil, this material is expected to readily biodegrade. When released into water, this material is expected to readily biodegrade.

**Bioaccumulative Potential:** This material is not expected to significantly bioaccumulate.

**Mobility in Soil:** When released into the soil, this material is not expected to evaporate significantly.

**Other adverse effects:** When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be flushed to sewer. If material becomes contaminated during use, dispose of accordingly. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

**Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)**

Not regulated

**Maritime Transport IMDG/GGVSea**  
Not regulated

**Air Transport ICAO-TI and IATA-DGR**  
Not regulated

## 15. Regulatory Information

### Chemical Inventory Status – Part 1

| Ingredient         | TSCA | EC  | Japan | Australia |
|--------------------|------|-----|-------|-----------|
| Glycerin (56-81-5) | Yes  | Yes | Yes   | Yes       |
| Water (7732-18-5)  | Yes  | Yes | Yes   | Yes       |

### Chemical Inventory Status – Part 2

| Ingredient         | Korea | Canada |      | Phil. |
|--------------------|-------|--------|------|-------|
|                    |       | DSL    | NDSL |       |
| Glycerin (56-81-5) | Yes   | Yes    | No   | Yes   |
| Water (7732-18-5)  | Yes   | Yes    | No   | Yes   |

### Federal, State & International Regulations - Part 1

| Ingredient         | SARA 302 |     | SARA 313      |       |
|--------------------|----------|-----|---------------|-------|
|                    | RQ       | TPQ | List Chemical | Catg. |
| Glycerin (56-81-5) | No       | No  | No            | No    |
| Water (7732-18-5)  | No       | No  | No            | No    |

### Federal, State & International Regulations - Part 2

| Ingredient         | RCRA   |        | TSCA |
|--------------------|--------|--------|------|
|                    | CERCLA | 261.33 | 8(d) |
| Glycerin (56-81-5) | No     | No     | No   |
| Water (7732-18-2)  | No     | No     | No   |

|  |                   |                       |                 |                     |  |
|--|-------------------|-----------------------|-----------------|---------------------|--|
| <b>Chemical Weapons Convention:</b> No |                   | <b>TSCA 12(b):</b> No |                 | <b>CDTA:</b> No     |  |
| <b>SARA 311/312:</b>                   | <b>Acute:</b> Yes | <b>Chronic:</b> Yes   | <b>Fire:</b> No | <b>Pressure:</b> No |  |
| <b>Reactivity:</b> No                  |                   | Pure / Liquid         |                 |                     |  |

**Australian Hazchem Code:** Not classified

**Poison Schedule:** None allocated

## 16. Other Information

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