Safety Data Sheet · OSHA HCS 2024

Glycerin USP Grade

USP Grade

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Glycerin USP Grade
Grade	USP Grade
CAS Number	56-81-5
Chemical Formula	C3H8O3
Molecular Weight	92.09 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	Glycerol; glycerine; 1,2,3-propanetriol
Recommended Use	USP grade: humectant, solvent and sweetener in pharmaceutical, food, cosmetic and personal-care products; soap making.
Restrictions on Use	USP grade: for drug, food and cosmetic use at levels permitted by the applicable regulations (21 CFR 182.1320).

2 Hazard Identification

Signal Word	Not applicable
Hazard Statements	Not classified as hazardous under GHS based on available data.
Precautionary Statements	No specific GHS precautionary statements required.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Glycerin	56-81-5	C3H8O3	99-100% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes	Rinse with water. Get medical attention if irritation develops or persists.
Skin	Wash with soap and water. Get medical attention if irritation develops.
Inhalation	Move to fresh air if discomfort occurs.
Ingestion	Rinse mouth with water. Get medical attention if you feel unwell.
Most Important Symptoms and Effects	No specific symptoms are expected from the hazards identified in Section 2.

Immediate Medical Attention and Special Treatment	Treat symptomatically. Get medical attention if symptoms develop or persist.

5 Fire-Fighting Measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical, or CO2. Use measures appropriate to local circumstances.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Specific Hazards Arising from the Chemical	Containers may rupture when heated.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Hazardous Combustion Products	Acrolein (a severe irritant) when overheated; carbon monoxide and carbon dioxide on combustion.

6 Accidental Release Measures

Personal Precautions	Wear safety glasses and gloves for cleanup. Spills can make floors slippery.
Environmental Precautions	Avoid releasing large quantities to drains or waterways.
Containment & Cleanup	Absorb or wipe up, then rinse the area with water. Dispose of according to local regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Keep tightly closed (hygroscopic) in a dry place away from strong oxidizers. Stainless steel, aluminum or polyethylene containers.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	15 mg/m^3 TWA total / 5 mg/m^3 TWA respirable
ACGIH TLV	10 mg/m^3 TWA (mist)
NIOSH REL	5 mg/m^3 TWA (mist)

Engineering Controls	General ventilation is normally adequate.
Eye/Face Protection	Safety glasses are recommended.
Skin Protection	Gloves are recommended for prolonged or repeated contact.
Respiratory Protection	Not normally required.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Clear, colorless, thick viscous liquid
Odor	Odorless
Odor Threshold	No data available
pH	Neutral (5.5–8 in aqueous solution)
Melting Point / Freezing Point	18–20 °C (64–68 °F); readily supercools and stays liquid
Boiling Point	290 °C (554 °F), with decomposition
Flash Point	160–199 °C (320–390 °F)
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	LEL 0.9–2.7% / UEL 19% (v/v in air)
Vapor Pressure	Below 0.001 hPa at 20 °C (negligible)
Vapor Density	3.2 (air = 1)
Relative Density	1.263 at 20/20 °C (water = 1)
Solubility	Completely miscible with water; hygroscopic
Partition Coefficient (n-octanol/water)	log Kow -1.75
Auto-ignition Temperature	370–429 °C (698–804 °F)
Decomposition Temperature	No data available
Viscosity	About 1,400 mPa·s at 20 °C
Particle Characteristics	Not applicable
Form	Liquid
Density	1.2606 g/cm^3 at 20 °C
Refractive Index	1.470-1.475

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Strong heating (decomposes near 290 °C to acrolein); contact with strong oxidizers; moist air (hygroscopic).
Incompatible Materials	Strong oxidizing agents (violent reaction with potassium permanganate, chromium trioxide and similar); strong bases.
Hazardous Decomposition Products	Acrolein (a severe irritant) when overheated; carbon monoxide and carbon dioxide on combustion.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.

Symptoms	No specific symptoms are expected from the hazards identified in Section 2.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.

Route	Value
LD50 Oral	12,600 mg/kg (rat)
LD50 Dermal (rabbit)	> 10,000 mg/kg

Carcinogen Classification

Agency	Status
IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Daphnia EC50: > 10000 mg/L (24 h, Daphnia magna (≤24 h), formulated product; 24-h window); Fish LC50: > 5000 mg/L (24 h, Goldfish (modified ASTM D 1345); 24-h window)
Persistence & Degradability	Not persistent; low soil/sediment adsorption, not expected to volatilize
Bioaccumulative Potential	log Kow −1.76
Mobility in Soil	Very high mobility in soil (estimated Koc ≈ 1)

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	Not a listed or characteristic hazardous waste.

14 Transport Information

Not regulated for transport under US DOT 49 CFR Subchapter C, IMDG, or IATA DGR.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Not listed
CERCLA Reportable Quantity (RQ)	Not a CERCLA hazardous substance (no RQ); not an EPCRA Section 313 chemical.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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