

PRODUCT IDENTIFICATION



Product Name: Glycerin Technical Grade

CAS Number: 56-81-5

Molecular Formula: C₃H₈O₃

Molecular Weight: 92.09 g/mol

Grade: Technical Grade

Purity / Concentration: 100%

Synonyms: Glycerol, 1,2,3-Propanetriol

PRODUCT OVERVIEW

Glycerin Technical Grade is a high-purity, viscous, and colorless liquid featuring a 99.2% assay. With a low water content of 0.2% and minimal impurities, this versatile compound is an essential ingredient for moisture retention and solvent applications across various industrial sectors.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial applications where consistent performance and high purity are required, though it is not intended for medical or food-grade specific labeling.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.2	98	—	Gas Chromatography
Color (APHA)	APHA	10	—	20	ASTM D1209
Specific Gravity (20°C)	g/mL	1.262	1.258	1.265	USP <841>
Residue After Ignition	%	0.0050	—	0.02	USP <281>
Water Content	%	0.2	—	0.5	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	0.1	—	5	USP <231>
Iron (Fe)	ppm	0.1	—	1	Atomic Absorption Spectroscopy
Chloride (Cl ⁻)	ppm	1	—	5	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	2	—	10	Ion Chromatography

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Viscous clear liquid, transparent colorless	Odor	Odorless
Form	Liquid	Boiling Point	290°C (554°F)
Melting / Freezing Point	18°C (64.4°F)	Flash Point	160°C (320°F)
Solubility	Highly water-soluble	Molecular Formula	C ₃ H ₈ O ₃
Molecular Weight	92.09 g/mol	Vapor Pressure (20°C)	0.0013 mmHg
Viscosity (25°C)	1.412 cP	Refractive Index (20°C)	1.474
Density (25°C)	1.261 g/mL		

APPLICATIONS

1. **Cosmetics** — Used as a humectant to effectively retain moisture and enhance skin hydration in various lotions and creams.
2. **Pharmaceuticals** — Functions as a reliable solvent for dissolving active pharmaceutical ingredients in liquid formulations.
3. **Plastics Manufacturing** — Utilized as a high-performance plasticizer to increase the flexibility and durability of plastic products.
4. **Food Production** — Serves as a safe sweetener and preservative to extend the shelf life and improve the texture of food items.

STORAGE & HANDLING

Glycerin is hygroscopic, meaning it readily absorbs moisture from the air, which can compromise its purity if not kept in tightly sealed containers. Storing the product in a cool, dry environment prevents contamination and maintains the integrity of its chemical properties for long-term use.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent contamination.
- Avoid contact with strong oxidizing agents.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Warning

No GHS pictograms assigned.

Hazard Statements:

- Not Classified
- Reported as not meeting GHS hazard criteria by 5522 of 5617 companies (only 1.7% companies provided GHS information). For more detailed information, please visit ECHA C&L website.

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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