

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 Gc Density	%	99.8	99	100.0	GC or density
Color (APHA)	APHA	6	—	10	APHA
Specific Gravity (20°C)	g/mL	1.2625	1.26	1.265	Hydrometer @ 25°C
Residue On Ignition	%	0.0030	0	0.01	Ignition
Water Karl Fischer	%	0.4	—	1	Karl Fischer
Heavy Metals (as Pb)	ppm	0.01	0	5	ICP
Chlorides	ppm	3	0	10	Ion chromatography
Sulfates	ppm	6	0	20	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	554 °F at 760 mmHg (decomposes) (NTP, 1992)
Melting / Freezing Point	64 °F (NTP, 1992)	Flash Point	320 °F (NTP, 1992)
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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.