

PRODUCT IDENTIFICATION



Product Name: Glycerin Technical Grade

CAS Number: 56-81-5

Molecular Formula: $C_3H_8O_3$

Molecular Weight: 92.09 g/mol

Grade: Technical Grade

Purity / Concentration: 100%

Synonyms: Glycerol, 1,2,3-Propanetriol

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Glycerin Technical Grade, a versatile, clear, and odorless liquid with an assay of 99.8%. This humectant is widely utilized across industrial sectors for its exceptional moisture-retaining properties and solvent capabilities.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and manufacturing applications where high purity is required, though it is not intended for direct medical or food-grade consumption.

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 @ 20°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	$C_3H_8O_3$
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 key humectant in formulations to retain moisture and significantly enhance skin hydration.
2. **Pharmaceuticals** — Acts as a high-quality solvent for various medicinal compounds and complex chemical formulations.
3. **Manufacturing** — Utilized as an effective plasticizer to improve the flexibility and durability of plastic products.
4. **Food and Beverage** — Serves as a reliable sweetener and preservative to maintain the quality and shelf-life of food products.

STORAGE & HANDLING

Glycerin is hygroscopic, meaning it readily absorbs moisture from the air, which can compromise its 99.8% purity if not stored in tightly sealed containers. Keeping the product in a cool, dry, and well-ventilated area prevents degradation and maintains the specific gravity of 1.2625 g/mL required for consistent industrial performance.

- 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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