

PRODUCT IDENTIFICATION



Product Name: Propylene Glycol Technical Grade

CAS Number: 57-55-6

Molecular Formula: C₃H₈O₂

Molecular Weight: 76.09 g/mol

Grade: Technical Grade

Purity / Concentration: 100%

Synonyms: 1,2-Propanediol, Propylene Glycol

PRODUCT OVERVIEW

Propylene Glycol Technical Grade (CAS 57-55-6) is a high-purity, clear, colorless liquid featuring a minimum assay of 99.5%. Its low water content of 0.1% and minimal impurity profile make it a versatile solvent and moisture-retaining agent for various industrial applications.

Grade Significance: Technical Grade indicates that this product is manufactured to meet rigorous industrial standards, providing a cost-effective solution for non-medical or non-food-specific applications where high chemical purity is still required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.5	99	—	Gas Chromatography
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.036	1.035	1.037	USP <841>
Residue After Ignition	%	0.0010	—	0.01	USP <281>
Water Content	%	0.1	—	0.2	Karl Fischer Titration
Iron (Fe)	ppm	0.1	—	1	Atomic Absorption Spectroscopy
Chloride (Cl ⁻)	ppm	1	—	5	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	1	—	5	Ion Chromatography
Acidity As Acetic Acid	%	0.0010	—	0.0050	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, slightly viscous colorless liquid	Odor	Slightly sweet odor
Form	Liquid	Boiling Point	188°C (370.4°F)
Melting / Freezing Point	-59°C (-74.2°F)	Flash Point	104°C (219.2°F)
Solubility	Highly water-soluble, miscible with organic solvents	Molecular Formula	C ₃ H ₈ O ₂
Molecular Weight	76.09 g/mol	Vapor Pressure (20°C)	0.12 mmHg
Viscosity (25°C)	59 cP	Refractive Index (20°C)	1.431
Density (25°C)	1.036 g/mL		

APPLICATIONS

1. **Analytical Chemistry** — Functions as a reliable mobile phase component in reversed-phase chromatography for the precise separation of organic compounds.
2. **Food Production** — Acts as an effective moisture-retaining agent to improve the texture and extend the shelf life of various food products.
3. **Pharmaceuticals** — Used as a stable solvent in manufacturing processes to ensure proper solubility and long-term stability of medicinal formulations.
4. **Automotive and HVAC** — Serves as a high-performance antifreeze and heat transfer fluid in cooling systems due to its low freezing point.

STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is essential to maintain the high purity and low water content of the product. While not classified as hazardous, keeping containers tightly sealed prevents moisture absorption and contamination, ensuring the material performs consistently in your specific application.

- Store in a cool, dry place away from direct sunlight.
- Use materials compatible with propylene glycol, such as HDPE or glass containers.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper ventilation when handling to minimize inhalation exposure.
- Use personal protective equipment (PPE) such as gloves and goggles as necessary.

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 6762 of 6899 companies (only 2% 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.