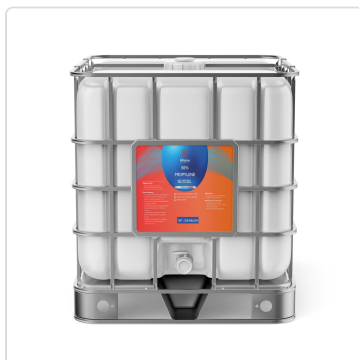


PRODUCT IDENTIFICATION



Product Name: 50% Propylene Glycol Technical Grade

CAS Number: 57-55-6

Molecular Formula: C₃H₈O₂

Molecular Weight: 76.09 g/mol

Grade: Technical Grade

Purity / Concentration: 50%

Synonyms: Propylene Glycol 50%, Propylene Glycol Solution

PRODUCT OVERVIEW

Alliance Chemical offers high-quality 50% Propylene Glycol Technical Grade, a clear and colorless liquid ideal for diverse industrial applications. With a precise assay of 50.1% and a specific gravity of 1.035 g/mL, this solution provides consistent performance for your formulations.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and commercial use where efficiency and cost-effectiveness are prioritized over USP or food-grade certifications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	50.1	49	51	Gas Chromatography
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.035	—	—	USP <841>
Water Content	%	0.1	—	0.2	Karl Fischer Titration
Chloride (Cl ⁻)	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, colorless liquid	Odor	Slightly sweet odor
Boiling Point	188°C (371°F)	Melting / Freezing Point	-59°C (-74°F)
Flash Point	104°C (219°F)	Solubility	Miscible with water and many organic solvents
Molecular Formula	C ₃ H ₈ O ₂	Molecular Weight	76.09 g/mol
Vapor Pressure (20°C)	0.1 mmHg	Viscosity (25°C)	50 cP
Refractive Index (20°C)	1.431	Density (25°C)	1.036 g/mL
Decomposition Temp.	No significant decomposition below 150 °C under normal storage		

APPLICATIONS

1. **Analytical Chemistry** — Serves as a reliable mobile phase component in reversed-phase high-performance liquid chromatography for the separation of organic compounds.
2. **Cosmetics** — Functions as an effective humectant in various cosmetic formulations to help products retain essential moisture.
3. **Automotive** — Acts as a non-toxic antifreeze agent in cooling systems to prevent freezing and ensure engine temperature stability.
4. **Coatings and Paints** — Used as a solvent to improve the flow and application properties of industrial paints and coatings.

STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is essential to maintain the integrity of the 50% concentration and prevent contamination. While the product is not classified as a significant GHS hazard, keeping containers tightly sealed prevents moisture absorption and maintains the low acidity levels required for sensitive applications.

- Store in a cool, dry place away from direct sunlight.
- Use materials compatible with polyethylene or stainless steel for storage.
- Avoid contact with strong oxidizing agents.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Use 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 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

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