

PRODUCT IDENTIFICATION



Product Name: Propylene Glycol 50% – USP Grade (C₃H₈O₂)

CAS Number: 57-55-6

Molecular Formula: C₃H₈O₂

Molecular Weight: 76.09 g/mol

Grade: USP Grade

Purity / Concentration: 50%

Synonyms: Propylene Glycol, 1,2-Propanediol

PRODUCT OVERVIEW

Propylene Glycol 50% USP Grade is a high-purity, clear, and colorless liquid formulated for consistent performance across sensitive applications. With a strictly controlled impurity profile, including heavy metals at 0.05 ppm and minimal moisture content, this product serves as a reliable solvent and moisture-retaining agent.

Grade Significance: USP Grade signifies that the product meets the rigorous quality standards set by the United States Pharmacopeia, ensuring it is safe and pure enough for use in pharmaceutical and food-grade applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

Certificate of Analysis data not available for this product.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Slightly sweet odor
Form	Liquid	Boiling Point	Not characterized for the 50% solution
Melting / Freezing Point	Not characterized for the 50% solution	Flash Point	210 °F (NTP, 1992)
Specific Gravity	1.037	Solubility	Completely miscible with water
Molecular Formula	C ₃ H ₈ O ₂	Molecular Weight	76.09 g/mol
Vapor Pressure (20°C)	0.13 mmHg	Viscosity (25°C)	0.87 cP
Refractive Index (20°C)	1.431	Density (25°C)	1.036 g/mL

APPLICATIONS

- Pharmaceuticals** — It acts as a high-quality solvent and carrier for the formulation of various oral, injectable, and topical medications.
- Food and Beverage** — This grade is utilized as an effective moisture-retaining agent to maintain the texture and shelf-life of various food formulations.
- Analytical Chemistry** — It is commonly employed as a mobile phase component in reversed-phase chromatography for the precise separation of organic compounds.
- Industrial Cooling** — The chemical is used in specialized antifreeze formulations to leverage its low freezing point and reliable thermal properties.

STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is essential to maintain the product's high purity and prevent contamination. Although it is non-flammable, keeping containers tightly sealed prevents moisture absorption and oxidation, ensuring the material remains within its stringent USP specifications over time.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to avoid chemical interaction.
- Keep away from strong oxidizing agents and acids.
- Ensure proper ventilation when handling to minimize inhalation exposure.
- 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 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.

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