

PRODUCT IDENTIFICATION



Product Name: Propylene Glycol Inhibited ACS Grade

CAS Number: 57-55-6

Molecular Formula: C₃H₈O₂

Molecular Weight: 76.09 g/mol

Grade: ACS Grade

Purity / Concentration: 100%

Synonyms: 1,2-Propanediol, Propylene Glycol

PRODUCT OVERVIEW

Propylene Glycol Inhibited ACS Grade is a high-purity, clear, and colorless solvent featuring a 99.8% assay and extremely low impurity levels, such as 0.1 ppm for chlorides. This versatile 1,2-propanediol is widely utilized across sensitive laboratory and industrial applications where consistent chemical performance is required.

Grade Significance: ACS Grade signifies that the chemical meets the strict purity standards set by the American Chemical Society, ensuring the product is suitable for laboratory use and rigorous analytical testing.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	100.0	99.5	100.5	GC
Color (APHA)	APHA	3	—	10	APHA
Specific Gravity (20°C)	g/mL	1.036	1.033	1.039	Hydrometer @ 25°C
Water Karl Fischer	%	0.1	0	0.2	Karl Fischer
Iron (Fe)	ppm	0.01	0	0.5	ICP-MS
Chlorides As Cl	ppm	0.15	0	0.5	ICP
Sulfate (SO ₄ ²⁻)	ppm	1	0	5	ICP
Acidity As Acetic	ppm	10	0	20	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless viscous liquid	Odor	Slightly sweet odor
Form	Liquid	Boiling Point	370.8 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-76 °F (NTP, 1992)	Flash Point	210 °F (NTP, 1992)
Specific Gravity	1.036	Solubility	Highly water miscible, broad organic solvent compatibility
Molecular Formula	C ₃ H ₈ O ₂	Molecular Weight	76.09 g/mol
Vapor Pressure (20°C)	0.1 mmHg	Viscosity (25°C)	59 cP
Refractive Index (20°C)	1.431	Density (25°C)	1.036 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Used as a critical mobile phase component in reversed-phase high-performance liquid chromatography for the precise separation of organic compounds.
2. **Food and Beverage** — Acts as an effective moisture-retaining agent that enhances the texture and extends the shelf life of various food products.
3. **Pharmaceutical** — Functions as a high-quality solvent for active pharmaceutical ingredients, ensuring stability and solubility in diverse dosage forms.
4. **Automotive and Industrial** — Serves as a reliable, non-toxic antifreeze and heat transfer fluid for cooling systems requiring inhibited corrosion protection.

STORAGE & HANDLING

Propylene glycol is hygroscopic, meaning it readily absorbs moisture from the air, which can alter its specific gravity and water content specifications. Proper sealing in a cool, dry environment is essential to maintain its high purity and prevent contamination that could compromise sensitive analytical results.

- 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 exposure.
- Use appropriate personal protective equipment (PPE) such as gloves and safety 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: Not Classified

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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