

PRODUCT IDENTIFICATION



Product Name: 50% Propylene Glycol Inhibited

CAS Number: 57-55-6

Molecular Formula: C₃H₈O₂

Molecular Weight: 76.09 g/mol

Grade: Technical Grade

Purity / Concentration: 50%

Synonyms: Propylene Glycol Inhibited Solution, Inhibited Propylene Glycol

PRODUCT OVERVIEW

Alliance Chemical offers high-quality 50% Inhibited Propylene Glycol, a clear, technical-grade solution engineered for superior thermal transfer and corrosion protection. With a controlled assay of 50.3% and a low chloride content of 0.5 ppm, this product ensures consistent performance in demanding industrial heat exchange systems.

Grade Significance: Technical Grade indicates that this product is formulated for industrial and manufacturing applications where functional performance is critical, rather than food or pharmaceutical purity standards.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	50.3	49	51	Titration
Color (APHA)	APHA	5	—	10	ASTM D1209
pH	—	8.5	8	9	ASTM E70
Specific Gravity (20°C)	g/mL	1.035	—	—	ASTM D4052
Water Content	%	0.1	—	0.2	ASTM E203
Iron (Fe)	ppm	0.1	—	1	ICP-OES
Chloride (Cl ⁻)	ppm	0.5	—	5	ASTM D5808
Sulfate (SO ₄ ²⁻)	ppm	1	—	10	ASTM D5808
Inhibitor Wt Pct	%	2.5	2	3	GC

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 ethanol
Molecular Formula	C ₃ H ₈ O ₂	Molecular Weight	76.09 g/mol
Vapor Pressure (20°C)	0.04 mmHg	Viscosity (25°C)	50 cP
Refractive Index (20°C)	1.433	Density (25°C)	1.036 g/mL
Partition Coefficient (log P)-0.9		Decomposition Temp.	>= 230-260°C

APPLICATIONS

1. **HVAC and Refrigeration** — Used as a reliable heat transfer fluid in large-scale chillers and HVAC systems to maintain efficient operating temperatures.
2. **Automotive** — Functions as a high-performance antifreeze and coolant, preventing engine freezing and overheating in extreme weather conditions.
3. **Industrial Manufacturing** — Provides essential corrosion inhibition for metal cooling components, extending the service life of sensitive machinery.
4. **Chemical Synthesis** — Acts as a stable solvent in various industrial chemical processes where precise concentration and purity are required.

STORAGE & HANDLING

Proper storage in a cool, dry, well-ventilated area is essential to maintain the integrity of the chemical inhibitors and prevent degradation. While the product is not classified as hazardous, keeping containers tightly sealed prevents contamination from moisture or environmental impurities that could compromise its performance.

- Store in a cool, dry place away from direct sunlight.
- Compatible with HDPE and stainless steel containers.
- Avoid contact with strong oxidizing agents.
- Use appropriate personal protective equipment (PPE) when handling.
- Ensure adequate ventilation in storage areas.

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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