

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's 50% Propylene Glycol Inhibited is a high-purity technical grade solution engineered for superior thermal conductivity and corrosion protection. With a precise specific gravity of 1.0447 g/mL and extremely low impurity levels, this clear liquid is the industry standard for reliable heat transfer applications.

Grade Significance: Technical Grade indicates that this product is manufactured specifically for industrial and mechanical applications, prioritizing functional performance and cost-effectiveness over food or pharmaceutical-grade requirements.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	50	49.5	50.5	GC
Color (APHA)	APHA	3	—	10	APHA
Specific Gravity (20°C)	g/mL	1.0447	1.0397	1.0497	Hydrometer @ 20°C
Heavy Metals As Pb	ppm	≤ 2.5 ppm	—	—	ICP-MS
Iron (Fe)	ppm	≤ 0.25 ppm	—	—	ICP-MS
Chlorides As Cl	ppm	≤ 0.25 ppm	—	—	ICP
Acidity As Acetic	ppm	3	0	10	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)	Specific Gravity	1.04 (20 °C)
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** — Used in commercial HVAC systems and industrial chillers to provide efficient heat transfer while preventing system degradation.
2. **Automotive** — Serves as a reliable antifreeze and coolant additive in automotive cooling systems to prevent freezing and overheating.
3. **Manufacturing** — Acts as a corrosion inhibitor for metal components, extending the lifespan of machinery operating in demanding thermal environments.
4. **Chemical Processing** — Functions as a stable solvent in various chemical synthesis processes where controlled thermal properties are required.

STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is essential to maintain the chemical integrity and efficacy of the corrosion inhibitors. While the product is not classified as hazardous under GHS criteria, keeping containers tightly sealed prevents contamination that could alter its specific gravity or performance metrics.

- 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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