

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

Our 50% Propylene Glycol Inhibited solution is a high-quality technical grade fluid designed for reliable thermal regulation. Featuring a precise 50% assay and low impurity levels—including iron at 0.25 ppm or less—it provides exceptional heat transfer efficiency for demanding industrial applications.

Grade Significance: Technical Grade indicates that this product is manufactured specifically for industrial and mechanical applications where performance and cost-effectiveness are prioritized over food-grade certifications.

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	~106 °C	Melting / Freezing Point	-33 °C (freeze / crystallization onset)
Flash Point	Not flammable (aqueous solution)	Specific Gravity	1.046
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 extensively in industrial chillers and heating loops to ensure consistent thermal transfer and system longevity.
2. **Automotive** — Functions as a dependable antifreeze and coolant agent, protecting engines from freezing and overheating in diverse climates.
3. **Industrial Manufacturing** — Acts as a specialized solvent in complex chemical synthesis processes where controlled reaction environments are required.
4. **Metalworking** — Contains essential inhibitors that protect metal components from corrosion and oxidation during operation within closed-loop systems.

STORAGE & HANDLING

Proper storage in a cool, dry, and well-ventilated area is critical to maintaining the chemical integrity and inhibitor effectiveness of this solution. While not classified as hazardous, keeping containers tightly sealed prevents contamination and moisture absorption, ensuring the fluid performs consistently over its shelf life.

- 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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