

PRODUCT IDENTIFICATION



Product Name: 100% Ethylene Glycol Inhibited

CAS Number: 107-21-1

Molecular Formula: C₂H₆O₂

Molecular Weight: 62.07 g/mol

Grade: Laboratory Grade

Purity / Concentration: 100%

Synonyms: Ethylene Glycol with Inhibitors, Inhibited Ethylene Glycol

PRODUCT OVERVIEW

Alliance Chemical's Laboratory Grade 100% Ethylene Glycol Inhibited is a clear, viscous liquid with a purity of 99.8% as indicated by assay. This product is primarily used in automotive cooling systems to prevent freezing and overheating, as well as serving as a heat transfer medium.

Grade Significance: Laboratory Grade Ethylene Glycol Inhibited signifies a high level of purity and quality control, ensuring reliable and reproducible results in laboratory and research applications. This grade is suitable where stringent purity requirements are needed.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.8	99	—	GC
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.114	1.113	1.116	USP <841>
Water Content	%	0.05	—	0.1	Karl Fischer
Iron (Fe)	ppm	0.05	—	0.5	ICP-OES
Chloride (Cl ⁻)	ppm	0.1	—	1	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	0.2	—	2	Ion Chromatography
Acidity As Acetic Acid	%	0.0010	—	0.0050	Titration
Diethylene Glycol Wt	%	0.05	—	0.1	GC
Inhibitor Content Ppm	ppm	150.0	100.0	200.0	UV-Vis

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear viscous liquid	Odor	Slightly sweet odor
Form	Liquid	Boiling Point	197°C (387°F)
Melting / Freezing Point	-13°C (9°F)	Flash Point	111°C (232°F)
Specific Gravity	1.113	Solubility	Fully water soluble
Molecular Formula	C ₂ H ₆ O ₂	Molecular Weight	62.07 g/mol
Vapor Pressure (20°C)	0.06 mmHg	Viscosity (25°C)	20.1 cP
Refractive Index (20°C)	1.431	Density (25°C)	1.114 g/mL

APPLICATIONS

1. **Automotive** — Ethylene Glycol Inhibited is a crucial component in automotive cooling systems. It effectively lowers the freezing point and raises the boiling point of the coolant, preventing damage to the engine in extreme temperatures.
2. **Industrial Processing** — This chemical serves as an efficient heat transfer medium in various industrial applications. Its high boiling point and thermal stability make it suitable for maintaining consistent temperatures in reactors and other equipment.
3. **Chemical Manufacturing** — Ethylene Glycol Inhibited acts as a versatile solvent in various chemical reactions and processes. Its ability to dissolve a wide range of compounds makes it valuable in synthesis and purification procedures.
4. **Hydraulic Systems** — The lubricating properties of Ethylene Glycol Inhibited make it useful in certain hydraulic systems. It helps reduce friction and wear, ensuring smooth and efficient operation of hydraulic machinery.
5. **Laboratory Research** — Due to its high purity and consistent properties, Laboratory Grade Ethylene Glycol Inhibited is often used as a standard in research settings. It can be used as a solvent, reagent, or calibration standard in various analytical techniques.

STORAGE & HANDLING

Proper storage is essential to maintain the integrity and purity of Ethylene Glycol Inhibited. Exposure to air and moisture can degrade the product over time, potentially affecting its performance. Additionally, as it is harmful if swallowed, it should be stored in a secure location, away from incompatible materials and unauthorized personnel.

- Store in a cool, dry place away from direct sunlight.
- Use materials compatible with ethylene glycol, such as HDPE or stainless steel.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper ventilation in storage areas to prevent vapor accumulation.
- Use appropriate personal protective equipment (PPE) when handling.

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**



Hazard Statements:

- H302: Harmful if swallowed [Warning Acute toxicity, oral]

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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