

PRODUCT IDENTIFICATION



Product Name: 100% Ethylene Glycol Inhibited

CAS Number: 107-21-1

Molecular Formula: C₂H₆O₂

Molecular Weight: 62.07 g/mol

Grade: Inhibited

Purity / Concentration: 100%

Synonyms: Ethylene Glycol with Inhibitors, Inhibited Ethylene Glycol

PRODUCT OVERVIEW

Alliance Chemical offers 100% Inhibited Ethylene Glycol, a high-purity heat transfer fluid formulated to meet rigorous industrial standards. With a low water content of 0.05% and minimal impurities like chloride and iron, this clear viscous liquid is ideal for demanding cooling and hydraulic applications.

Grade Significance: The inhibited grade means the product is pre-blended with additives to protect metal surfaces from corrosion, saving the end user from having to source and mix their own stabilizers.

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 (386.6°F)
Melting / Freezing Point	-13°C (8.6°F)	Flash Point	111°C (231.8°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** — Used as a primary component in heavy-duty cooling systems to prevent both freezing in winter and overheating during peak operation.
2. **Industrial Manufacturing** — Functions as a reliable heat transfer medium to maintain optimal temperatures in complex industrial machinery and closed-loop systems.
3. **Chemical Processing** — Acts as a versatile solvent for various chemical reactions, providing stable physical properties and consistent performance.
4. **Hydraulics** — Utilized in hydraulic systems where its specific gravity and lubricating properties help maintain system efficiency and component longevity.

STORAGE & HANDLING

Proper storage is essential to maintain the integrity of the chemical inhibitors and prevent contamination from moisture or environmental elements. Because the product is classified as harmful if swallowed, it must be stored in a secure, well-ventilated area to ensure worker safety and prevent accidental ingestion.

- 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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