

PRODUCT IDENTIFICATION

**Product Name:** 100% Ethylene Glycol Inhibited**CAS Number:** 107-21-1**Molecular Formula:** $C_2H_6O_2$ **Molecular Weight:** 62.07 g/mol**Grade:** Inhibited**Purity / Concentration:** 100%**Synonyms:** Ethylene Glycol with Inhibitors, Inhibited Ethylene Glycol

PRODUCT OVERVIEW

Alliance Chemical provides high-purity 100% Inhibited Ethylene Glycol, a clear, viscous liquid formulated for superior thermal management. With an assay of 100.0% and trace impurities held to strict limits—such as chlorides at 0.05 ppm—this product ensures reliability in demanding heat transfer applications.

Grade Significance: The Inhibited grade means the glycol has been treated with specialized additives to protect metal surfaces from corrosion, significantly extending the lifespan of your cooling or heating infrastructure.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	100.0	99.5	100.5	GC
Color (APHA)	APHA	1	—	30	APHA
Color Lovibond	Y/R	ND	—	5	AOCS Cc 13e-92
Specific Gravity (20°C)	g/mL	1.1158	1.1108	1.1208	Hydrometer @ 20°C
Non-Volatile Residue	%	ND	0	0.1	Residue on Ignition
Water Karl Fischer	%	0.03	—	0.07	Karl Fischer
Aluminum Al	ppm	≤ 0.01 ppm	—	—	ICP-MS
Arsenic As	ppm	≤ 0.05 ppm	—	—	ICP-MS
Iron (Fe)	ppm	ND	—	0.1	ICP-MS
Chlorides As Cl	ppm	0.05	—	2	ICP
Nitrate (NO ₃ ⁻)	ppm	≤ 3 ppm	—	—	Per specification
Phosphate	ppm	≤ 24 ppm	—	—	Per specification
Sulfate (SO ₄ ²⁻)	ppm	≤ 1 ppm	—	—	ICP
Acidity As Acetic	%	ND	—	0.05	Titration
Aldehydes As Acetaldehyde	ppm	2	—	30	Spectrophotometry
Ash	%	ND	—	0.05	Residue on Ignition
Deg Content	%	0.02	—	0.1	GC
Uv Transmittance 220Nm	%T	89.5	70	—	UV Spectrophotometry
Uv Transmittance 275Nm	%T	95.2	90	—	UV Spectrophotometry
Uv Transmittance 350Nm	%T	95	95	100.0	UV Spectrophotometry

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	387.7 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	9 °F (NTP, 1992)	Flash Point	232 °F (NTP, 1992)
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

- Automotive** — Used as a primary component in cooling systems to effectively prevent freezing in winter and overheating during summer operation.
- Industrial Manufacturing** — Serves as a high-performance heat transfer medium for industrial processes that require consistent thermal regulation.
- Chemical Processing** — Acts as an effective solvent for various specialized chemical reactions and industrial synthesis processes.
- Hydraulics** — Utilized in hydraulic systems where its excellent lubricating properties help reduce mechanical wear and maintain system efficiency.

STORAGE & HANDLING

Proper storage is essential to maintain the integrity of the chemical inhibitors and prevent contamination that could compromise system performance. Because the product is harmful if swallowed and carries risks of organ damage from repeated exposure, it must be kept in sealed, clearly labeled containers within a well-ventilated, secure area.

- 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
- H373: May cause damage to organs through prolonged or repeated exposure

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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