TECHNICAL DATA SHEET

100% Ethylene Glycol Inhibited

Revised: 07/22/2026

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: Laboratory
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 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	1.113	1.11	1.116	Hydrometer @ 25°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	$C_2H_6O_2$	**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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com