

PRODUCT IDENTIFICATION



Product Name: Ethylene Glycol Inhibited ACS Grade

CAS Number: 107-21-1

Molecular Formula: C₂H₆O₂

Molecular Weight: 62.07 g/mol

Grade: ACS Grade

Purity / Concentration: 100%

Synonyms: Ethylene Glycol with Inhibitors, Ethylene Glycol ACS

PRODUCT OVERVIEW

Ethylene Glycol Inhibited ACS Grade is a high-purity chemical solution designed for precise industrial and laboratory applications. Featuring a 99.8% assay and low impurity levels, such as 0.05 ppm for heavy metals, this clear, viscous liquid is essential for heat transfer and solvent-based processes.

Grade Significance: ACS Grade signifies that the product meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for analytical and precise industrial use. This grade provides the end user with confidence in the chemical's consistency and low impurity profile.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.8	95	—	GC
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.114	1.113	1.115	USP <841>
Residue After Ignition	%	0.0005	—	0.0050	ACS
Water Content	%	0.02	—	0.1	Karl Fischer
Heavy Metals (as Pb)	ppm	0.05	—	1	ICP-MS
Iron (Fe)	ppm	0.05	—	0.2	ICP-MS
Chloride (Cl ⁻)	ppm	0.1	—	5	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	0.2	—	5	Ion Chromatography
Acidity	—	Passes Test	—	—	ACS
Aldehydes	ppm	2	—	5	ACS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless 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 miscible with water, polar organic solvents
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)	1.433	Density (25°C)	1.113 g/mL

APPLICATIONS

- 1. Automotive** — Used as a primary component in engine cooling systems to effectively prevent freezing in winter and overheating during high-temperature operation.
- 2. Manufacturing** — Serves as a reliable heat transfer medium in industrial closed-loop cooling and heating systems to maintain consistent thermal regulation.
- 3. Chemical Synthesis** — Acts as a versatile solvent in various organic synthesis reactions and chemical processing applications where high purity is required.
- 4. Hydraulics** — Utilized in hydraulic systems due to its favorable low freezing point and high boiling point, ensuring stable performance under extreme conditions.

STORAGE & HANDLING

Proper storage is critical to prevent contamination and maintain the integrity of the inhibited formulation. Because this product is harmful if swallowed, it must be stored in a cool, well-ventilated area in tightly sealed containers to minimize exposure risks and prevent moisture absorption.

- 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 when handling to minimize inhalation exposure.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

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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