

PRODUCT IDENTIFICATION



Product Name: Ethylene Glycol Inhibited ACS Grade

CAS Number: 107-21-1

Molecular Formula: $C_2H_6O_2$

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, clear liquid engineered for precise thermal management and chemical synthesis. With an assay of 99.93% and extremely low impurity levels, such as 2 APHA color and 0.1 ppm chlorides, this product provides reliable performance for demanding industrial applications.

Grade Significance: ACS Grade signifies that the product meets the stringent analytical standards set by the American Chemical Society, ensuring it is suitable for high-precision laboratory and industrial work where impurities must be kept to a minimum.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	99.93	99.43	100.4	GC
Color (APHA)	APHA	2	0	5	APHA
Specific Gravity (20°C)	g/mL	1.1158	1.1108	1.1208	Hydrometer @ 25°C
Water Karl Fischer	%	0.04	0	0.05	Karl Fischer
Iron (Fe)	ppm	0.0070	0	0.1	ICP-MS
Chlorides As Cl	ppm	0.1	0	0.5	ICP
Acidity As Acetic	ppm	5	0	30	Titration
Aldehydes As Acetaldehyde	ppm	9	0	30	Spectrophotometry
Ash	ppm	10	0	40	Residue on Ignition
Deg Content	%	0.0234	0	0.05	GC
Uv Transmittance 220Nm	%T	85.3	70	—	UV Spectrophotometry
Uv Transmittance 275Nm	%T	95.2	90	—	UV Spectrophotometry
Uv Transmittance 350Nm	%T	100.0	98	—	UV Spectrophotometry

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	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 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 base for premium cooling systems to prevent freezing and overheating while inhibiting internal corrosion.
- 2. Industrial Manufacturing** — Serves as an efficient heat transfer medium in closed-loop systems to maintain stable process temperatures.
- 3. Chemical Synthesis** — Functions as a versatile solvent in organic reactions where high purity and low contaminant levels are critical for yield.
- 4. Hydraulics** — Utilized in hydraulic fluids to leverage its low freezing point and high boiling point for consistent operation in extreme climates.

STORAGE & HANDLING

Proper storage is essential to maintain the high purity of this grade and prevent contamination that could compromise its effectiveness. Because the product is classified as harmful if swallowed and may cause organ damage through repeated exposure, it must be kept in a tightly sealed, labeled container in a cool, well-ventilated area to ensure worker safety.

- 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
- 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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