

PRODUCT IDENTIFICATION



Product Name: Ethylene Glycol ACS Grade

CAS Number: 107-21-1

Molecular Formula: C₂H₆O₂

Molecular Weight: 62.07 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: Ethylene Glycol, 1,2-Ethanediol

PRODUCT OVERVIEW

Ethylene Glycol ACS Grade is a high-purity chemical reagent characterized by a 99.93% assay and exceptional clarity, meeting stringent American Chemical Society standards. This clear, colorless liquid is primarily utilized as a versatile solvent and heat transfer fluid in demanding industrial and laboratory applications.

Grade Significance: The ACS Grade designation indicates that this product meets the rigorous purity standards established by the American Chemical Society, ensuring reliability and consistency for analytical and high-precision applications.

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 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	Soluble in water, alcohol, and other polar 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)	1.431	Density (25°C)	1.113 g/mL

APPLICATIONS

1. **Automotive** — Functions as a critical component in cooling systems, effectively lowering the freezing point of engine coolant to prevent damage in cold climates.
2. **Chemical Manufacturing** — Serves as a reliable solvent for various synthetic reactions, ensuring high-quality output through its high purity profile.
3. **Hydraulics** — Utilized in hydraulic systems where its low freezing point and high boiling point provide stability under varying temperature conditions.
4. **Food Processing** — Acts as a humectant to help retain moisture in specific food products, maintaining texture and shelf stability.

STORAGE & HANDLING

Ethylene Glycol should be stored in a cool, dry, and well-ventilated area to maintain chemical integrity and prevent degradation. Given its classification as harmful if swallowed and its potential for organ damage, containers must be kept tightly sealed and labeled to ensure workplace safety and prevent accidental ingestion.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Keep away from strong oxidizing agents and acids.
- Ensure proper ventilation when handling to avoid inhalation of vapors.
- 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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