

PRODUCT IDENTIFICATION



Product Name: Monoethanolamine (MEA) ACS Grade

CAS Number: 141-43-5

Molecular Formula: C₂H₇NO

Molecular Weight: 61.08 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: Ethanolamine, 2-Aminoethanol

PRODUCT OVERVIEW

Monoethanolamine (MEA) ACS Grade is a high-purity, clear, colorless liquid essential for precise laboratory and industrial applications. With a certified assay of 99% and extremely low impurity levels, such as 0.03 ppm iron and 0.06% water, this chemical provides the consistency required for demanding analytical and formulation work.

Grade Significance: ACS Grade signifies that this product meets the rigorous purity standards established by the American Chemical Society, ensuring it is suitable for analytical laboratory use and critical industrial processes where impurity interference must be minimized.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	99	99	100.0	GC
Color (APHA)	APHA	2	—	10	APHA
Specific Gravity (20°C)	g/mL	1.017	1.015	1.019	Hydrometer @ 20°C
Residue On Evaporation	ppm	15	—	50	Evaporation
Water Karl Fischer	%	0.06	—	0.2	Karl Fischer
Iron (Fe)	ppm	0.03	—	0.1	ICP-MS
Chlorides As Cl	ppm	0.3	—	1	ICP
Acidity As Acetic	ppm	15	—	50	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Ammonia-like odor
Form	Liquid	Boiling Point	338 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	50.5 °F (NTP, 1992)	Flash Point	200 °F (NTP, 1992)
Specific Gravity	1.018	Solubility	Miscible with water and many organic solvents
Molecular Formula	C ₂ H ₇ NO	Molecular Weight	61.08 g/mol
Vapor Pressure (20°C)	0.5 mmHg	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.446	Density (25°C)	1.01 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Used as a mobile phase component in reversed-phase high-performance liquid chromatography to ensure accurate separation of organic compounds.
2. **Water Treatment** — Functions as an effective pH adjuster in industrial water treatment systems to maintain system stability and prevent chemical imbalances.
3. **Personal Care** — Acts as a surfactant and pH balancer in the formulation of shampoos and skin care products to improve product performance and texture.
4. **Metalworking** — Serves as a vital corrosion inhibitor in metalworking fluids, protecting machinery and parts from degradation during manufacturing processes.

STORAGE & HANDLING

MEA is classified as a hazardous substance that causes severe skin burns and eye damage, necessitating storage in a cool, dry, and well-ventilated area to prevent accidental exposure. Proper containment is essential to avoid contamination and maintain the integrity of its high-purity ACS grade specifications.

- Store in a cool, dry place away from incompatible materials.
- Use HDPE or glass containers for storage to prevent reactions.
- Avoid exposure to moisture and heat to maintain product stability.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles when handling.
- Ensure adequate ventilation in the storage area to minimize inhalation risks.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H302: Harmful if swallowed
- H312: Harmful in contact with skin
- H314: Causes severe skin burns and eye damage
- H332: Harmful if inhaled
- H335: May cause respiratory irritation

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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