TECHNICAL DATA SHEET

Monoethanolamine (MEA)

Revised: 07/22/2026

PRODUCT IDENTIFICATION

Product Name: Monoethanolamine (MEA)
CAS Number: 141-43-5
Molecular Formula: C_2H_7NO
Molecular Weight: 61.08 g/mol
Grade: Technical Grade
Purity / Concentration: 100%
Synonyms: Ethanolamine, 2-Aminoethanol

PRODUCT OVERVIEW

Monoethanolamine (MEA) is a high-purity, technical-grade chemical characterized by its colorless, viscous liquid form and 99.2% assay. With a low iron content of 0.1 ppm and minimal water levels, this versatile amino alcohol serves as an essential building block in industrial cleaning, corrosion inhibition, and chemical synthesis.

Grade Significance: Technical grade indicates that this product is manufactured to meet rigorous industrial standards, providing a balance of high purity and cost-effectiveness for large-scale applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	100.0	99.5	100.5	GC
Color (APHA)	APHA	2	—	15	APHA
pH	—	7	6	8	pH Meter
Water Karl Fischer	%	0.01	0	0.3	Karl Fischer

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless, viscous 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**	Soluble in water, alcohol, and various organic solvents
Molecular Formula	C_2H_7NO	**Molecular Weight**	61.08 g/mol
Vapor Pressure (20°C)	0.5 mmHg	**Viscosity (25°C)**	1.0 cP
Refractive Index (20°C)	1.455	**Density (25°C)**	1.01 g/mL

APPLICATIONS

1. **Detergent Manufacturing** — MEA acts as a vital ingredient in the formulation of surfactants, enhancing the cleaning power and degreasing efficiency of industrial detergents.
2. **Metalworking and Protection** — It is widely used as a corrosion inhibitor to create a protective barrier on metal surfaces, effectively preventing oxidation and rust in harsh industrial environments.
3. **Water Treatment** — This chemical is utilized for precise pH adjustment, ensuring that water treatment processes maintain the optimal chemical balance required for system stability.
4. **Food Processing** — MEA serves as an effective emulsifier in specific food applications, aiding in the stabilization of mixtures to ensure consistent texture and quality.

STORAGE & HANDLING

Proper storage is critical because MEA is a corrosive substance that can cause severe skin burns and eye damage upon contact. It must be stored in a cool, well-ventilated area away from incompatible materials to maintain its chemical integrity and prevent hazardous reactions.

- Store in a cool, dry place away from direct sunlight.
- Use materials compatible with amines, such as HDPE or stainless steel.
- Avoid contact with strong acids and oxidizing agents.
- Ensure proper ventilation when handling to minimize inhalation risks.
- 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: Danger

Hazard Statements:

- H302: Harmful if swallowed [Warning Acute toxicity, oral]
- H312: Harmful in contact with skin [Warning Acute toxicity, dermal]
- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]
- H332: Harmful if inhaled [Warning Acute toxicity, inhalation]

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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