

PRODUCT IDENTIFICATION



Product Name: Monoethanolamine (MEA) Technical Grade

CAS Number: 141-43-5

Molecular Formula: C₂H₇NO

Molecular Weight: 61.08 g/mol

Grade: Technical Grade

Purity / Concentration: 100%

Synonyms: Ethanolamine, 2-Aminoethanol

PRODUCT OVERVIEW

Monoethanolamine (MEA) Technical Grade is a versatile, high-purity chemical compound featuring 99% assay and extremely low impurity levels, such as 0.03 ppm iron content. This colorless, viscous liquid is widely utilized as a fundamental building block in industrial formulations requiring precise pH control and chemical reactivity.

Grade Significance: Technical Grade ensures a high level of purity suitable for most industrial and manufacturing applications while remaining cost-effective for large-scale operations. It provides the consistency required for reliable performance without the premium costs associated with specialized pharmaceutical or reagent grades.

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	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 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)	1.455	Density (25°C)	1.01 g/mL

APPLICATIONS

1. **Cleaning and Detergents** — MEA acts as a critical ingredient in the synthesis of surfactants, enhancing the cleaning efficiency of soaps and industrial detergents.
2. **Metalworking** — It serves as an effective corrosion inhibitor, protecting metal surfaces from oxidation and degradation during manufacturing processes.
3. **Water Treatment** — This chemical is utilized for precise pH adjustment in water systems, ensuring optimal operational conditions and preventing equipment scaling.
4. **Food Processing** — MEA is employed as a stabilizing emulsifier, aiding in the consistency and shelf-life of various food-grade mixtures.

STORAGE & HANDLING

Due to its classification as a hazardous substance that causes severe skin burns and eye damage, MEA must be stored in a cool, well-ventilated area away from incompatible materials. Proper containment is essential to prevent accidental exposure and to maintain the chemical integrity of the liquid by avoiding contamination or moisture absorption.

- 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
- 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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