



Technical Data Sheet (TDS)

Product: Monoethanolamine (MEA) 99% Supplier: Basekim CAS Number: 141-43-5
Chemical Formula: C_2H_7NO Molecular Weight: 61.08 g/mol Chemical Family:
Ethanolamines Grade: Industrial Grade

1. Product Description

Monoethanolamine (MEA) is a clear, colorless, hygroscopic organic liquid that contains both primary amine and hydroxyl functional groups. It offers excellent water solubility, alkaline properties, and chemical reactivity.

Industrial manufacturers use MEA in natural gas sweetening, carbon dioxide removal, detergents, chemical intermediates, metalworking fluids, and specialty formulations.

2. Technical Specifications

The following values represent a typical commercial specification for Monoethanolamine 99%. Confirm the final acceptance limits against the manufacturer-approved specification and batch Certificate of Analysis (COA).

Parameter	Specification
Appearance	Clear, colorless liquid
Monoethanolamine Purity	≥ 99.0 wt%
Water Content	≤ 0.20 wt%
Specific Gravity (20/20°C)	1.017–1.019
Color (Pt-Co), HDPE/ISO Tank	≤ 10
Color (Pt-Co), Steel Drum	≤ 30
Solubility in Water	Completely miscible
Odor	Ammonia-like



3. Typical Physical and Chemical Properties

Property	Typical Value
Chemical Name	2-Aminoethanol
CAS Number	141-43-5
Molecular Formula	C ₂ H ₇ NO
Molecular Weight	61.08 g/mol
Physical State at 25°C	Liquid
Density at 20°C	Approximately 1.018 g/cm ³
Boiling Point	Approximately 170–171°C
Melting Point	Approximately 10.3°C
Flash Point	Approximately 85°C (closed cup; method dependent)
Vapor Pressure at 20°C	Approximately 0.5 mmHg
pH	Alkaline in aqueous solutions
Water Solubility	Completely miscible
Hygroscopic	Yes

Typical physical values are reference information, not guaranteed batch acceptance limits.

4. Main Industrial Applications

- Natural gas sweetening and H₂S removal
- Carbon dioxide absorption and gas purification
- Detergent and surfactant manufacturing
- Chemical intermediates and organic synthesis
- Metalworking fluids and specialty lubricants
- Textile and leather processing
- Industrial cleaning and pH adjustment
- Agricultural chemical formulations



5. Packaging

Packaging	Typical Capacity
Steel or HDPE Drum	210 kg
IBC Tank	1,000 liters
ISO Tank	Bulk shipment
Customized Packaging	Subject to availability

Packaging availability and net filling weights must be confirmed before shipment.

6. Storage and Handling

- Store in tightly closed, chemically compatible containers.
- Keep the product in a dry, well-ventilated storage area.
- Protect the material from moisture and contamination.
- Maintain temperatures above its approximate 10°C solidification point when liquid handling is necessary.
- Keep away from strong oxidizing agents, strong acids, and incompatible materials.
- Wear appropriate chemical-resistant gloves, eye protection, and protective clothing.
- Follow the current Safety Data Sheet during handling and transportation.

7. Transportation Information

Parameter	Information
UN Number	UN 2491
Proper Shipping Name	ETHANOLAMINE or ETHANOLAMINE SOLUTION
Transport Hazard Class	8
Packing Group	III
Primary Hazard	Corrosive

Transport classification should be confirmed against the current SDS and applicable shipping regulations.



8. Quality Control

Quality-control personnel should evaluate commercial Monoethanolamine using approved analytical methods.

Recommended checks include purity, water content, appearance, color, and specific gravity.

The supplier should provide a batch Certificate of Analysis when required by the purchase agreement.

9. Shelf Life

Shelf life depends on packaging integrity, storage conditions, moisture exposure, and the manufacturer's stability data.

Buyers should confirm the manufacturer's assigned shelf life and retesting requirements rather than assume a universal expiration period.

10. Supplier Information

Basekim supplies industrial Monoethanolamine for chemical processing, manufacturing, gas treatment, and other commercial applications. Customers can request product specifications, packaging details, and bulk quotations.

11. Disclaimer

This Technical Data Sheet provides general technical information and representative commercial specifications. Physical properties may vary with temperature, purity, and test methodology. This document does not constitute a batch-specific Certificate of Analysis or a manufacturer-certified product specification.

Customers should confirm final product specifications, transportation requirements, and application suitability before purchase.

Technical references: Published MEA technical bulletins from Huntsman and commercial product specifications.