



Material Safety Data Sheet (MSDS)

Monoethanolamine (MEA) 99%

Supplier: Basekim Product Name: Monoethanolamine (MEA) CAS Number: 141-43-5
Molecular Formula: C_2H_7NO Molecular Weight: 61.08 g/mol Product Grade: Industrial
Grade Document Type: Material Safety Data Sheet (MSDS/SDS) Preparation Date:
October 13, 2026

This is a reference SDS draft for industrial Monoethanolamine 99%, not a supplier-certified or regulatory-approved SDS. Basekim must verify the batch composition, applicable jurisdictional classification, emergency contacts, and regulatory information before official publication.

Section 1: Identification of the Substance and Supplier

Parameter	Information
Product Name	Monoethanolamine
Abbreviation	MEA
Synonyms	Ethanolamine, 2-Aminoethanol, 2-Hydroxyethylamine
CAS Number	141-43-5
EC Number	205-483-3
Chemical Formula	C_2H_7NO
Recommended Use	Gas treatment, detergents, chemical processing, industrial formulations
Supplier	Basekim
Website	www.basekim.com
Emergency Telephone	To be completed with verified supplier emergency contact

Restrictions on Use: Industrial and professional applications only, unless the product meets the requirements for another intended use.

Section 2: Hazards Identification

GHS Signal Word: Danger

Hazard Pictograms: GHS05 (Corrosion), GHS07 (Exclamation Mark)



Hazard Statements

Code	Hazard Description
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

These are commonly reported classifications for industrial MEA. The ECHA substance evaluation also identifies H335 at concentrations of 5% or higher. Confirm the final classification under the applicable current regulation.

Precautionary Statements

- P260: Do not breathe mist, vapors, or spray.
- P264: Wash thoroughly after handling.
- P270: Do not eat, drink, or smoke when using this product.
- P280: Wear protective gloves, protective clothing, eye protection, and face protection.
- P301+P330+P331: If swallowed, rinse mouth. Do not induce vomiting.
- P303+P361+P353: If on skin or hair, remove contaminated clothing immediately and rinse skin with water.
- P305+P351+P338: If in eyes, rinse cautiously with water for several minutes and remove contact lenses if easy to do.
- P310: Immediately call a poison center or physician.

Section 3: Composition and Information on Ingredients

Component	CAS Number	Concentration
Monoethanolamine	141-43-5	≥ 99.0%
Water and other impurities	Various	≤ 1.0% total

The supplied batch COA should confirm the exact composition.



Section 4: First Aid Measures

Inhalation: Move the affected person to fresh air immediately. Obtain medical attention. If breathing becomes difficult, trained personnel should provide appropriate assistance.

Skin Contact: Remove contaminated clothing immediately. Rinse the affected skin thoroughly with running water for at least 15 minutes. Seek immediate medical attention.

Eye Contact: Rinse eyes cautiously with water for at least 15 minutes. Remove contact lenses when possible. Continue rinsing and obtain emergency medical treatment.

Ingestion: Rinse the mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

Most Important Symptoms: Severe chemical burns, eye injury, respiratory irritation, and gastrointestinal injury.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

- Water spray
- Alcohol-resistant foam
- Dry chemical powder
- Carbon dioxide

Specific Hazards: Heating and combustion may release hazardous gases, including carbon oxides and nitrogen oxides.

Protective Equipment: Firefighters should wear self-contained breathing apparatus and suitable protective clothing.

Special Procedures: Cool exposed containers with water spray from a safe distance. Prevent contaminated firefighting water from entering drains.



Section 6: Accidental Release Measures

Personal Precautions: Restrict access to the affected area. Use appropriate protective equipment and ensure adequate ventilation.

Environmental Precautions: Prevent the product from entering waterways, drains, and soil.

Containment and Cleanup:

1. Stop the leak if personnel can do so safely.
2. Contain the spilled liquid using compatible barriers.
3. Absorb small spills with inert absorbent material.
4. Collect contaminated material in suitable chemical waste containers.
5. Dispose of collected waste according to applicable regulations.

Only properly trained personnel should respond to significant spills.

Section 7: Handling and Storage

Safe Handling

- Avoid direct contact with skin and eyes.
- Use suitable ventilation and transfer equipment.
- Prevent inhalation of vapors and mists.
- Keep containers closed when not in use.
- Avoid contact with incompatible substances.

Storage Conditions

- Store in tightly sealed, compatible containers.
- Protect the material from atmospheric moisture.
- Keep away from strong acids and oxidizing agents.
- Maintain suitable temperatures for liquid handling.
- Protect storage equipment from corrosion and contamination.

Monoethanolamine may solidify around 10.3°C. Facilities should consider temperature-controlled handling where necessary.



Section 8: Exposure Controls and Personal Protection

Occupational Exposure Limits

Occupational exposure limits vary by jurisdiction. Commonly referenced limits include:

Organization	Exposure Limit
OSHA PEL	3 ppm (TWA)
ACGIH TLV	3 ppm (TWA), 6 ppm (STEL)
NIOSH REL	3 ppm (TWA), 6 ppm (STEL)

Verify current applicable occupational limits before using this document.

Engineering Controls

Provide appropriate ventilation, enclosed transfer systems where practical, and accessible emergency eyewash and safety-shower equipment.

Personal Protective Equipment

Eye Protection: Chemical splash goggles and suitable face protection.

Hand Protection: Chemically resistant gloves selected using manufacturer breakthrough data.

Skin Protection: Protective clothing resistant to the chemical.

Respiratory Protection: Use suitable respiratory protection when engineering controls cannot adequately limit exposure. Select equipment according to exposure assessment and applicable regulations.

Section 9: Physical and Chemical Properties

Parameter	Typical Value
Appearance	Clear, colorless liquid
Odor	Ammonia-like
Molecular Formula	C ₂ H ₇ NO
Molecular Weight	61.08 g/mol
Boiling Point	Approximately 170–171°C



Melting Point	Approximately 10.3°C
Flash Point	Approximately 85°C (closed cup; method dependent)
Density (20°C)	Approximately 1.018 g/cm ³
Specific Gravity (20/20°C)	1.017–1.019
Vapor Pressure (20°C)	Approximately 0.5 mmHg
Water Solubility	Completely miscible
pH	Alkaline in aqueous solution
Purity	≥ 99.0%

Values are representative and may vary with purity and test method.

Section 10: Stability and Reactivity

Chemical Stability: Stable under recommended storage and handling conditions.

Reactivity: Reacts with acids and certain reactive chemicals.

Conditions to Avoid: Excessive heat, moisture contamination, and incompatible materials.

Incompatible Materials: Strong oxidizing agents, strong acids, and incompatible reactive compounds.

Hazardous Decomposition Products: Carbon oxides, nitrogen oxides, and other hazardous decomposition gases under fire conditions.

Hazardous Polymerization: Not expected under normal storage conditions.

Section 11: Toxicological Information

Routes of Exposure

- Inhalation
- Skin contact
- Eye contact
- Ingestion



Acute Effects

Inhalation: May cause respiratory irritation and harmful exposure effects.

Skin Contact: Causes chemical burns and may be harmful through skin absorption.

Eye Contact: Causes serious eye damage.

Ingestion: Harmful if swallowed and may cause severe gastrointestinal burns.

Long-Term Exposure

Repeated exposure may cause persistent irritation or other health effects depending on concentration and exposure conditions.

Carcinogenicity: Do not interpret the absence of a specific carcinogenic classification as proof of no carcinogenic risk. Consult the current substance assessment.

Section 12: Ecological Information

Aquatic Toxicity: Monoethanolamine may harm aquatic organisms, particularly at elevated concentrations.

Biodegradability: Generally considered readily biodegradable under suitable conditions.

Bioaccumulation: Significant bioaccumulation is not generally expected.

Environmental Mobility: High water solubility can facilitate movement through aquatic systems.

Environmental Precautions: Avoid uncontrolled releases into waterways and drainage systems.

Some regulatory classifications identify long-term aquatic hazards; confirm the applicable environmental classification for the supplied product.

Section 13: Disposal Considerations

Dispose of Monoethanolamine waste according to local and national regulations.

- Do not discharge untreated chemical waste into drains.



- Collect contaminated absorbents in appropriate containers.
- Use licensed waste-disposal contractors where required.
- Empty containers may retain hazardous residues.
- Do not reuse packaging without suitable cleaning and authorization.

Section 14: Transport Information

Parameter	Classification
UN Number	UN 2491
Proper Shipping Name	ETHANOLAMINE
Transport Hazard Class	8
Packing Group	III
Hazard Label	Corrosive
Marine Pollutant	Not generally classified as a marine pollutant

These transport identifiers are supported by published dangerous-goods references. Final declarations must follow the current regulations for the transport mode and destination.

Section 15: Regulatory Information

Monoethanolamine is subject to chemical safety, occupational exposure, labeling, and transportation requirements.

Relevant frameworks may include:

- EU REACH Regulation
- EU CLP Regulation
- OSHA Hazard Communication Standard
- GHS classification and labeling requirements
- ADR, RID, IMDG, and IATA transport regulations

Registrations, inventory status, and country-specific obligations must be checked before export or distribution.

Section 16: Other Information

Product: Monoethanolamine (MEA) 99% Supplier: Basekim Document Date: October 13, 2026 Document Status: Draft for technical and regulatory verification