



## Material Safety Datasheet

**MONOETHANOLAMINE (MEA)****1. DESCRIPTION****Trade Name:** Monoethanolamine (MEA)**Chemical Name:** MONOETHANOLAMINE, Colamine, Glycinol, Olamine; Ethanolamine; 2-Aminoethanol; 2-Hydroxyethylamine; beta-Ethanolamine; beta-Hydroxyethylamine**Application:** Industrial Usage, Gas Treatment**Supplier:** TEAM Chemicals**Telephone:** +44 (0)207 408 7700 - +98 912 3717539**Address:** No. 43, Souri St., 43 Ashrafi Esfahani Expressway**2. COMPOSITION / INFORMATION ON INGREDIENTS****Ingredients**

NAME	CAS RN	Content
Monoethanolamine	141-43-5	100%

**3. HAZARD IDENTIFICATION****EMERGENCY OVERVIEW:**

May cause skin and eye irritation. May cause respiratory tract irritation. Prolonged or repeated skin contact may cause skin irritation or allergic skin sensitization reaction. The substance may be toxic to kidneys, lungs, liver, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation.

**Potential Acute Health Effects:**

Very hazardous in case of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (irritant, permeator), of inhalation (lung irritant). Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive).

**Eye Contact:** Contact with eyes may cause irritation.**Skin Contact:** This product may cause irritation to the skin.**Inhalation:** Health injuries are not known or expected under normal use.**Ingestion:** Ingestion of this product may cause nausea, vomiting and diarrhea.**Irritant** YES **Flammable** NO**Carcinogenic** NO **Oxidant** NO**Explosive** NO **Environmental Hazard** NO**Corrosive** YES (Highly corrosive in presence of Aluminum, Copper)**(Risk-Phrases)** - **(Safety-Phrases)** -



## Material Safety Datasheet

# MONOETHANOLAMINE (MEA)

### 4. FIRST AID MEASURES

**Eye Contact:** Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

**Skin Contact:** If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).

**Inhalation:** · If fumes or combustion products are inhaled remove from contaminated area.

- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.

**Ingestion:** Drink plenty of water. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, obtain medical attention..

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing Media</b>	Use water spray, fog or foam. Do not use water jet.
<b>Fire Fighting</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Fire/Explosion Hazard</b>	Not available
<b>Fire Incompatibility</b>	Not available
<b>Personal Protection</b>	As in any fire, wear self-contained breathing apparatus pressure-demand.

### 6. ACCIDENTAL RELEASE MEASURES

**Small Spill:**

- Clean up all spills immediately. Dilute with water.
- Wipe up.
- Keep people away from and upwind of spill/leak.
- Do not touch damaged containers.
- Clean contaminated surface thoroughly.

**Large Spill:**

Combustible material. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other noncombustible material. Do not get water inside container.

### 7. HANDLING AND STORAGE

**HANDLING Precautions:** Handle and open container with care. Do not get this material in your eyes, on your skin, or on your clothing. Wear personal protective equipment. Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray.

**Storage Precautions:**

Use care in handling/storage. Avoid all possible sources of ignition (spark or flame). Keep containers tightly closed in a dry, cool and well-ventilated place.



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE Limits

TWA: 3 STEL: 5 (ppm) [United Kingdom (UK)]  
TWA: 3 STEL: 6 (ppm) from ACGIH (TLV) [United States]  
STEL: 15 (mg/m<sup>3</sup>) from NIOSH [United States]  
TWA: 3 STEL: 6 (ppm) from NIOSH [United States]  
TWA: 3 (ppm) from OSHA (PEL) [United States]  
TWA: 6 (mg/m<sup>3</sup>) from OSHA (PEL) [United States]

### PERSONAL PROTECTION

Use of protective coveralls and long sleeves is recommended.

Use of impervious boots are recommended.

Protective gloves.

If ventilation is not sufficient to effectively prevent buildup of aerosols or mists, appropriate NIOSH/MSHA respiratory protection must be provided.

### ENGINEERING CONTROLS

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

When using do not smoke. Ensure that eyewash stations and safety showers are proximal to the work-station location.

## 9. PHYSICAL & CHEMICAL PROPERTIES

**Physical state and appearance:** Viscous Liquid

**Color:** Pale Colorless

**Odor:** Sharp (Ammonia odor)

**pH (1% solution):** 10

**Melting/Freezing Point:** 10.3 °C

**Flash Point:** 341 °C

**Specific Gravity:** 1.018

**Vapor Pressure:** 0.1 kPa (@ 20°C)

**Vapor Density:** 2.1 (Air = 1)

**Solubility:** Soluble in water



## 10. STABILITY & REACTIVITY

**Chemical Stability:** Stable at normal conditions

**Conditions to Avoid:** Direct heat, ignition sources, incompatible materials, light, moisture.

**Materials to Avoid:** Strong oxidizing agents, acids.

**Special Remarks on Reactivity:** ACETIC ACID, ACETIC ANHYDRIDE, ACROLEIN, ACRYLIC ACID, ACRYLONITRILE, CHLOROSULFONIC ACID, EPICHLOROHYDRIN,

Reacts with copper, aluminium, zinc and their alloys. Halogenated compounds

**Special Remarks on Corrosivity:** Highly corrosive in presence of aluminum, of copper.

## 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: 1,089 mg/kg  
Species: Rat  
Method: OECD Test Guideline 401  
Information taken from reference works and the literature.

Acute inhalation toxicity : LC50 : 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Method: Acute toxicity estimate

Acute dermal toxicity : LD50: 2,000 mg/kg  
Method: Acute toxicity estimate

Skin corrosion/irritation : Species: Rabbit  
Result: Causes burns.  
Serious eye damage/eye irritation  
Method: OECD Test Guideline 404

## 12. ECOLOGICAL INFORMATION

### Product information:

#### Ecotoxicology Assessment

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### Toxicity Components:

#### Test result Ethanolamine

Toxicity to fish : LC50: 349 mg/l

Exposure time: 96 h

Species: Cyprinus carpio (Carp)

Test Type: semi-static test

Method: Tested according to Directive 92/69/EEC.

Information taken from reference works and the literature.

### Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.



## Material Safety Datasheet

**MONOETHANOLAMINE (MEA)****13. DISPOSAL CONSIDERATION****DISPOSAL METHODS:**

Dispose of waste material according to Local, State, and Provincial Environmental Regulations.

**14. TRANSPORT INFORMATION****U.S. DOT Shipping Description:****14.1 UN number**

ADR : UN 2491

RID : UN 2491

IMDG-Code : UN 2491

IATA-DGR : UN 2491

**14.2 Proper shipping name**

ADR : ETHANOLAMINE

RID : ETHANOLAMINE

IMDG-Code : ETHANOLAMINE

IATA-DGR : Ethanolamine

**14.3 Transport hazard class**

ADR : 8

RID : 8

IMDG-Code : 8

IATA-DGR : 8

**14.4 Packing group****ADR**

Packing group : III

Classification Code : C7

Hazard Identification Number : 80

Labels : 8

Tunnel restriction code : (E)

**RID**

Packing group : III

Classification Code : C7

Hazard Identification Number : 80

Labels : 8

**IMDG-Code**

Packing group : III

Labels : 8

EmS Code : F-A, S-B

**IATA-DGR**

Packing instruction (cargo aircraft): 856

Packing instruction (passenger aircraft): 852

Packing instruction (LQ) : Y841

Packing group : III

Labels : 8

**15. REGULATORY INFORMATION**

Connecticut hazardous material survey.: Ethanolamine Illinois toxic substances disclosure to employee act: Ethanolamine Rhode Island RTK hazardous substances: Ethanolamine Pennsylvania RTK: Ethanolamine Minnesota: Ethanolamine Massachusetts RTK: Ethanolamine Massachusetts spill list: Ethanolamine New Jersey: Ethanolamine TSCA 8(b) inventory: Ethanolamine OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.



Tiam Earth Advanced Materials

Revision No.: 6.2  
Revision Date: 20.04.2021  
Document Code: TE-101-207



## Material Safety Datasheet

# MONOETHANOLAMINE (MEA)

[www.teamchem.co](http://www.teamchem.co)

### 16. ADDITIONAL INFORMATION

#### Reason(s) for Issue:

3 Yearly Revised Primary MSDS  
Update in Toxicological Information  
Update in Ecological Information

This MSDS summaries to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. TEAM cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.



Tiam Earth Advanced Materials

**Address:** No. 43, Sourl St., 43 Ashrafi Esfahani Expressway

**Telephone:** +44 (0)207 408 7700 - +98 912 3717539

**Email:** [sales@teamchem.co](mailto:sales@teamchem.co)

**Website:** [www.teamchem.co](http://www.teamchem.co)

**LinkedIn:** [linkedin.com/company/team-chemicals/](https://www.linkedin.com/company/team-chemicals/)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. TEAM Chemicals and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.