



Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300 or 202-483-7616

MATERIAL

**SAFETY DATA SHEETS**

Part Number/Trade Name: N-Methylethanolamine

Manufacturer: PHARMCO-AAPER  
58 Vale Road  
Brookfield, Connecticut 06804, USA  
Phone (203) 740-3471  
Fax (203) 740-3481  
  
1101 Isaac Shelby Drive  
Shelbyville, KY 40065  
Phone (502) 633-0650  
Fax (502) 633-0685

**1. CHEMICAL PRODUCT IDENTIFICATION**

Product Name: N-Methylethanolamine  
Molecular Formula: C(3)H(9)NO  
Synonyms: 2-Monomethylethanolamine; 2-Monomethylethanolamine; methyl ethanolamine; N-methyl-2-aminoethanol; N-methylaminoethanol; MEA;

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Ingredient(s)</u>	<u>CAS Number</u>	<u>Content (W/W)</u>
2-methylaminoethanol	109-83-1	99.0%

**3. HAZARDS IDENTIFICATION**

Emergency Overview

DANGER: COMUBSTIBLE, CORROSIVE LIQUID. Corrosive to the skin, eyes and respiratory system.  
CAUSES SEVERE BURNS.  
RISK OF SERIOUS DAMAGE TO EYES.  
MAY BE HARMFUL IF SWALLOWED.  
INGESTION MAY CAUSE GASTRIC DISTURBANCES.  
Avoid contact with the skin, eyes and clothing.  
Avoid inhalation of mists/vapors.  
Use with local exhaust ventilation.  
Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator.  
Wear NOIOSH-certified chemical goggles.  
Wear full face shield if splashing hazard exists.  
Wear chemical resistant protective gloves.  
Wear protective clothing.  
Eye wash fountains and safety showers must be easily accessible.

Potential Health Effects

Primary routes of exposure: Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact.

Skin contact may be a route of entry for liquefied gases.

Sensitization: Skin sensitizing effects were not observed in animal studies.

Medical conditions aggravated by overexposure: Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

#### Potential Environmental Effects

aquatic toxicity: acutely harmful for aquatic organisms; the inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations

#### **4. FIRST AID MEASURES**

General advice: Remove contaminated clothing.

If Inhaled: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin: Wash affected areas with water while removing contaminated clothing. Remove contaminated clothing. Immediate medical attention required. Wash soiled clothing immediately.

If in eyes: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed: Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

#### **5. FIRE FIGHTING MEASURES**

Flash point:	76°C	(DIN 51578)
Autoignition:	350°C	(DIN 51794)
Lower explosion limit:	1.6%(V)	
Upper explosion limit:	17.7%(V)	

Suitable extinguishing media: water fog, foam, dry extinguishing media

Hazards during fire-fighting: No particular hazards known.

Protective equipment for fire-fighting: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information: Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

NFPA Hazard Codes:

Health: 3      Fire: 2      Reactivity: 0      Special: C

#### **6. ACCIDENTAL RELEASE MEASURES**

Personal precautions: Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions: Substance/product is RCRA hazardous due to its properties. Do not discharge into waterways or sewer systems without proper authorization.

Cleanup: Spills should be contained, solidified, and placed in suitable containers for disposal

## 7. HANDLING AND STORAGE

### Handling

General advice: See MSDS section 10 – Stability and reactivity. See MSDS section 5 – fire fighting measures.

Protection against fire and explosion: See MSDS section 5 – Fire fighting measures.

### Storage

General advice: Containers should be stored tightly sealed in a dry place. Avoid extreme heat. No special precautions necessary. Keep away from sources of ignition – No smoking.

Storage incompatibility: General: Segregate from acids and acid-forming substances.

Storage stability: Storage duration: 24 months; may yellow after lengthy storage

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Advice on system design: Provide local exhaust ventilation to control vapors/mists.

### Personal protective equipment

Respiratory protection: Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) of a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection: Wear chemical resistant protective gloves. Consult with glove manufacturer for testing data.

Eye protection: Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection: Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit

General safety and hygiene measures: Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	liquid	
Odor:	amine-like	
Color:	colorless to yellow	
pH value:	13.6	(100 g/l, 20°C)
Melting point:	-3°C	
Boiling point:	158 - 160°C	
Vapor pressure:	1.06 mbar	(20°C)
Density:	.94 g/cm <sup>3</sup>	(20°C)
Partitioning coefficient n-Octanol/water (low Pow):	-0.91	
Viscosity, dynamic:	13 mPa.s	(20°C)
Solubility in water:		(20°C) miscible

Miscibility with water: miscible in all proportions

## 10. STABILITY AND REACTIVITY

Substances to avoid: acids, acid chlorides, isocyanates, oxidizing agent

Hazardous reactions: Strong exothermic reaction with acids. The product is chemically stable. Reacts with strong acids. Exothermic reaction. Rapid reaction.

Corrosion to metals: No corrosive effect on metal

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Oral:

LD50/rat: 1,880 mg/kg

Inhalation:

Rat: / 8 h(IRT)

No mortality within the stated exposition time as shown in animal studies.

Dermal:

LD50/rat: > 2,000 mg/kg

Skin irritation:

Rabbit: Risk of serious damage to eyes. (BASF-Test)

Sensitization:

Guinea pig maximization test/guinea pig: Non-sensitizing. Literature data.

### Chronic toxicity

Genetic toxicity: The substance was not mutagenic in bacteria.

Carcinogenicity: Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies.

## 12. ECOLOGICAL INFORMATION

### Environmental fate and transport

#### **Biodegradation:**

Test method: OECD 301 A (new version) (aerobic), activated sludge, domestic

Method of analysis: DOC reduction

Degree of elimination: 93% (21 d)

Evaluation: Readily biodegradable (according to OECD criteria).

Readily biodegradable (according to OECD criteria).

Bioaccumulation: Accumulation in organisms is not to be expected.

Adsorbable organically-bound halogen (AOX): This product contains no organically-bound halogen.

### Environmental toxicity

Acute and prolonged toxicity to fish:

zebra fish/LC50 (96 h): > 100 mg/l

Nominal concentration.

Acute toxicity to aquatic invertebrates:

OECD Guideline 202, part I Daphnia magna/EC50 (48 h): 33mg/l

The statement of the toxic effect relates to the analytically determined concentration.

Toxicity to aquatic plants:

green alga/EC10 (17 h): 28.1 mg/l

The statement of the toxic effect relates to the analytically determined concentration.

Toxicity to microorganisms:

aquatic

bacterium/EC10 (17 h): 11,500 mg/l

DIN/EN/ISO 8192-OECD 209-88/302/EEC, P. C aquatic

activated sludge, domestic/EC20 (0.5 H): > 1,000 mg/l

Other ecotoxicological advice: Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants.

### 13. DISPOSAL CONSIDERATION

Waste disposal of substance: Dispose of in accordance with national, state and local regulations. Dispose of in a RCRA-licensed facility. Do not discharge into waterways or sewer systems without proper authorization.

Container disposal: Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. If containers are not empty, they must be disposed of in a RCRA-licensed facility.

RCRA: D002

### 14. TRANSPORT INFORMATION

#### Land transport

USDOT

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (contains 2-METHYLAMINOETHANOL)

Hazard class: 8

ID-number: UN 2735

Packing group: III

#### Sea transport

IMDG

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (contains 2-METHYLAMINOETHANOL)

Hazard class: 8

ID-number: UN 2735

Packing group: III

Marine pollutant: NO

#### Air transport

IATA/ICAO

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. contains (2-METHYLAMINOETHANOL)

Hazard class: 8

ID-number: UN 2735  
Packing group: III

## 15. REGULATORY INFORMATION

### Federal Regulations

Registration status:  
TSCA, US released / listed

OSHA hazard category: Combustible Liquid, Acute target organ effects reported, Corrosive to Skin

SARA hazard categories (EPCRA 311/312): Acute, Fire

### State Regulations

State RTK

<u>CAS Number</u>	<u>Chemical name</u>	<u>State RTK</u>
109-83-1	2-methylaminoethanol	MA, PA

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA):** No chemicals on this material with known CAS numbers are subject to the reporting requirements of CERCLA.

## 16. OTHER INFORMATION

### HMIS III rating

Health: 3      Flammability: 2      Physical hazard: 0

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

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The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.