

Bang Nguyen

SVTA

952-934-2100 X231

10/21/04

**MSDS CODE AND NAME** : MEA MONOETHANOLAMINE, MEA**DATE ISSUED** : 3/31/2003**DATE PRINTED** : 10/18/2003**COMPANY** : HUNTSMAN

Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.

**Unusual or Explosive Hazards:**

None

**Special Protective Equipment for Firefighters:**

Wear special chemical protective clothing and positive pressure self-contained breathing apparatus. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residues.

**6. ACCIDENTAL RELEASE MEASURES (Transportation Spills: CHEMTREC (800)424-9300)****Procedures in Case of Accidental Release, Breakage or Leakage:**

Ventilate area. Avoid breathing vapor. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing.

**7. HANDLING AND STORAGE****Precautions to be Taken in****Handling:**

Minimum feasible handling temperatures should be maintained. Eye wash and safety shower should be available nearby when this product is handled or used.

**Storage:**

Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Protective Equipment (Type)****Eye/Face Protection:**

Avoid eye contact. Chemical type goggles with face shield must be worn. Do not wear contact lenses.

**Skin Protection:**

Protective clothing such as coveralls or lab coats must be worn. Launder or dry-clean when soiled. Gloves resistant to chemicals and petroleum distillates required. When handling large quantities, impervious suits, gloves, and rubber boots must be worn.

Remove and dry-clean or launder clothing soaked or soiled with this material before reuse. Dry cleaning of contaminated clothing may be more effective than normal laundering. Inform individuals responsible for cleaning of potential hazards associated with handling contaminated clothing.

**Respiratory Protection:**

Airborne concentrations should be kept to lowest levels possible. If vapor, mist or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

**Ventilation:**

Adequate to meet occupational exposure limits (see below).

**Exposure Limit for the Total Product:**

Monoethanolamine (ethanolamine): OSHA PEL-TWA 3.0 ppm; STEL 6.0 ppm ACGIH TLV-TWA 3.0 ppm; STEL 6.0 ppm

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance:**

Clear liquid

**Odor:**

Ammonia-like odor

**Boiling Point (degrees C):**

170.5 (339 F)

**Melting/Freezing Point (degrees C):**

10.5 (51 F)

**Specific Gravity (water=1):**

1.02

**pH:**

11.8

**Vapor Pressure:**

.2 mmHg at 20 C (68 F)

**Viscosity:**

23.6 cSt at 20 C (68 F)

**VOC Content:**

98% by ASTM D 2369

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

2.1

**Solubility in Water (%):**

&gt;10

**Other:**

None

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**10. STABILITY AND REACTIVITY**

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**This Material Reacts Violently With:**

Air Water Heat Strong Oxidizers Others X None of these

**Comments:**

This material reacts violently with acids.

**Products Evolved When Subjected to Heat or Combustion:**

Toxic levels of ammonia, combustion products of nitrogen, carbon monoxide, carbon dioxide, irritating aldehydes and ketones may be formed on burning in a limited air supply.

**Hazardous Polymerizations:**

DO NOT OCCUR



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## 11. TOXICOLOGICAL INFORMATION

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### TOXICOLOGICAL INFORMATION (ANIMAL TOXICITY DATA)

**Oral:**  
LD50 Believed to be > 1.00 - 2.00 g/kg (rat) moderately toxic  
**Inhalation:**  
Not determined.  
**Dermal:**  
LD50 > 1.00 g/kg (rabbit) slightly toxic

### IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES)

**Skin:**  
(Draize) Believed to be > 6.50 - 8.00 /8.0 (rabbit) corrosive  
**Eyes:**  
(Draize) Believed to be > 80.00 - 110.00 /110 (rabbit) extremely irritating  
**Sensitization:**  
Not determined.

### Other:

Prolonged and repeated ingestion of monoethanolamine has caused kidney and liver damage in laboratory animals. In addition, a developmental toxicity study, using unconventional statistical treatment of the data, demonstrated developmental toxicity in rats. The true significance of the study data is not clear, since a full re-interpretation of this data is not possible at this time. Additional or repeat studies are planned or underway to better define the toxic potential of this product, or to verify the results obtained from previous animal studies.

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## 12. DISPOSAL CONSIDERATIONS:

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### Waste Disposal Methods:

This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

### Remarks:

None

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## 13. TRANSPORT INFORMATION

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### Transportation

#### DOT:

**Proper Shipping Name:**  
Ethanolamine

**Hazard Class:**  
8

**Identification Number:**  
UN 2491

**Packing Group:**  
III

**Label Required:**  
Corrosive

### IMDG

**Proper Shipping Name:**



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Ethanolamine

**Hazard Class**  
8

**Identification Number**  
UN 2491

**Packing Group**  
III

**Label Required**  
Corrosive

ICAO

**Proper Shipping Name:**  
Ethanolamine

**Hazard Class**  
8

**Identification Number**  
UN 2491

**Packing Group**  
III

**Label Required**  
Corrosive

TDG

**Proper Shipping Name:**  
Ethanolamine

**Hazard Class:**  
8

**Identification Number:**  
UN 2491

**Label Required:**  
Corrosive

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#### 14. REGULATORY INFORMATION

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##### Federal Regulations:

##### SARA Title III:

Section 302/304 Extremely Hazardous Substances

**Chemical Name**  
None.

**CAS Number**

**Range in %**

**TPQ**

**RQ**

Section 311 Hazardous Categorization:

Acute X Chronic X Fire Pressure Reactive N/A

Section 313 Toxic Chemical

**Chemical Name**  
None.

**CAS Number**

**Concentration**

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**CERCLA 102(a)/DOT Hazardous Substances:**

Chemical Name  
None.

CAS Number Range in % RQ

**States Right-to-Know Regulations:**

Chemical Name  
Ethanol, 2-amino-

State Right-to-know  
CT, FL, IL, MA, NJ, PA, RI

**California Prop. 65:**

The following detectable components of this product are substances, or belong to classes of substances, known to the State of California to cause cancer and/or reproductive toxicity.

Chemical Name  
None.

CAS Number

**INTERNATIONAL REGULATIONS:****TSCA Inventory Status:**

This product, or its components, are listed on or are exempt from the the Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

**WHMIS Classification:**

Class E: Corrosive

**Canadian Inventory Status:**

This product, or its components, are listed on or are exempt from the Canadian Domestic Substance List (DSL).

**EINECS Inventory Status:**

This product, or its components, are listed on or are exempt from the European Inventory of Existing Chemical Substances (EINECS) or the European List of Notified Chemical Substances (ELINCS).

**Australian Inventory Status:**

This product, or its components, are listed on or are exempt from the Australian Inventory of Chemical Substances (AICS).

**Japan Inventory Status:**

This product, or its components, are listed on or are exempt from the Japan Ministry of International Trade and Industry (MITI) inventory.

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**15. ENVIRONMENTAL INFORMATION**

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**Aquatic Toxicity:**

LC50-96hr Aquatic toxicity rating is > 100.00 - 1000.00 ppm practically non-toxic

**Mobility:**

This product is expected to be mobile in soil and not be expected to adsorb to suspended solids or sediments in water.

**Persistence and Biodegradability:**

This product undergoes moderate biodegradation and is not expected to be persistent in the environment.

**Potential to Bioaccumulate:**

This product is not expected to bioaccumulate.  $K_{OW} = -1.31$

**Remarks:**

None



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**16. OTHER INFORMATION 3/31/2003**

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None

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