Material Safety Data Sheet – Triethanolamine

SECTION I · PRODUCT IDENTIFICATION

CHEMTREC – 24HR Emergency Telephone 1-800-424-9300
Manufacturers Address: Information Phone: (912) 443-6702
916 West Lathrop Avenue Date Prepared: 19 Sept 08
Savannah, Georgia 31415 Preparer: F. Spaeth

Synonym: TEA
Chemical Family: Alkanolamine

NFPA Rating
0- Minimal 1- Slight 2- Moderate
3- Serious 4- Extreme

SECTION II · HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS Number</th>
<th>%WT</th>
<th>TLV</th>
<th>PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethanolamine</td>
<td>102-71-6</td>
<td>99</td>
<td>5 mg/m³</td>
<td>5 mg/m³</td>
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</tbody>
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SECTION III · HAZARDOUS IDENTIFICATION

Potential Acute Health Effects: Mild irritation to skin, nasal and eye tissue.
Potential Chronic Health Effects: No adverse effects have been documented in humans.

SECTION IV · PHYSICAL and CHEMICAL PROPERTIES

Boiling Point Range: 680 °F
pH: 11
Solubility In Water: Soluble
Appearance/Odor: Clear liquid or moist white solid with ammonia-like odor.
Melting Point/Freezing Point: 70 °F

Vapor Density (Air=1): 5.3
Vapor Pressure (mmHg): < 0.1
VOC %: 1.0
Specific Gravity (H₂O=1): 1.12

SECTION V · FIRE FIGHTING MEASURES

Flash Point: 395°F
Auto Ignition: Not Determined.
Extinguishing Media: Use water spray, dry chemical, foam or carbon dioxide to extinguish flames.
Flammable Limits: Lower: 1.0 Upper: 10
Fire Fighting Procedures: Cool fire-exposed containers with water spray to prevent container weakening and possible rupture.
Fire and Explosion Hazards: Not considered a fire or an explosion hazard.

SECTION VI · STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.
Conditions to Avoid: This material reacts violently with acids.
Incompatibility: Avoid contact with oxidizing agents.
Hazardous Decomposition Products: Oxides of Carbon and Nitrogen plus irritating levels of aldehydes and ketones.
Hazardous Polymerization: Will not occur.
SECTION VII · STORAGE AND HANDLING

Precautions To Be Taken In Handling and Storage:  Always store in tightly sealed, properly labeled, original container! Prevent water from entering the container! Store in a cool, temperature moderated, dry well ventilated area. Other Precautions: Follow label instructions.

SECTION VIII · HEALTH AND FIRST AID

Skin: May cause slight irritation. Prolonged contact may cause more severe irritation and discomfort.
Eyes: May cause irritation experienced as mild discomfort with slight excess redness.
Inhalation: Heated mist or vapors causes respiratory tract irritation, headache, nausea, and drowsiness.
Ingestion: May causes abdominal discomfort, nausea and diarrhea.

FIRST AID PROCEDURES:
Eyes: Immediately flush with large amounts of cool running water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids. Get medical attention.
Skin: Wash skin with soap and water. If irritation persists get medical attention.
Inhalation: For excessive inhalation remove to fresh air. If breathing becomes difficult get medical attention.

SECTION IX · EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection: Eye Protection when pouring. Goggles, safety glasses with side shields are recommended.
Respiratory Protection: Where adequate ventilation is not available a NIOSH approved respirator must be worn. In confined areas, use a self-contained breathing apparatus.
Skin Protection: Wear gloves that cannot be penetrated by chemicals or oil.
Ventilation: General Mechanical ventilation to prevent TLV from exceeding control limits.
Protective Clothing: Selection of protective clothing depends on potential exposure conditions and may include gloves, and other protective items.
Other Equipment: Eye wash station in close proximity to use are advised

SECTION X · ACCIDENTAL RELEASE MEASURES

Small Spill: Ventilate the area. Stop source of spill. Absorb on inert media and collect into suitable container.
Large Spill: Shut off or plug source of spill. Dike area to contain spill. Shovel up material and place in air-tight container. Absorb residual on inert media and collect into suitable container.
Personal Protection in Case of Large Spill: Wear protective equipment as appropriate for the potential exposure hazard. A self-contained breathing apparatus should be used to avoid inhalation of the product.

SECTION XI · DISPOSAL CONSIDERATIONS

Waste Disposal Method: 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 material meets RCRA criteria for hazardous waste. Follow local, state and federal regulations for disposal.
SECTION XII · TRANSPORTATION

Proper Shipping Name: Not regulated by the U.S. DOT for drums.
Hazard Class:
UN Number:
Packaging Group:

SECTION XIII · TOXICOLOGY

Carcinogenicity: Not listed by any agency.
Mutagenicity: Not a mutagenic.
Reproductive: No data available.
Sensitization: Not considered a sensitizer

SECTION XIV · REGULATORY

RMP/PSM: Not Listed.
CERCLA-RQ: Not established.
EPCRA 311/312: Yes, see Section III
EPCRA 313: No.
FIFRA: No documented information found.
RCRA-CODE: No Hazardous Waste Identification.
TSCA: Listed on inventory

SECTION XV · OTHER INFORMATION

The information contained on this Material Safety Data Sheet is considered accurate as of the date of publication. It is not necessarily all inclusive nor fully adequate in every circumstance. The suggestions should not be confused with, nor followed in violation of applicable laws, regulations, rules or insurance requirements. No warranty, express or implied, of merchantability, fitness, accuracy of data, or the results to be obtained from the use thereof is made. The vendor assumes no responsibility for injury or damages resulting from the inappropriate use of this product.