Material Safety Data Sheet  
Tetraethylammonium Bromide

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Tetraethylammonium Bromide  
**Synonyms:** ETAMBRO; TEAB; Tetrylammonium Bromide.

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-91-0</td>
<td>Ethanaminium, n,n,n-triethyl-, bromide</td>
<td>99+</td>
<td>200-769-4</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: off-white to beige solid.  
**Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation.  
**Target Organs:** None.

**Potential Health Effects**  
**Eye:** May cause eye irritation.  
**Skin:** May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.  
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.  
**Inhalation:** May cause respiratory tract irritation.  
**Chronic:** No information found.

Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.  
**Skin:** Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.  
**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.  
**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.  
**Notes to Physician:** Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures
**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

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**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

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**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

**Storage:** Store in a cool, dry place. Keep containers tightly closed.

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**Section 8 - Exposure Controls, Personal Protection**

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanaminium, n,n,n-triethyl-, bromide</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

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**Section 9 - Physical and Chemical Properties**

**Physical State:** Solid

**Appearance:** off-white to beige
Odor: odorless
pH: 6.5 (In solution)
Vapor Pressure: Negligible.
Vapor Density: 5.3
Evaporation Rate: Negligible.
Viscosity: Not applicable.
Boiling Point: Not applicable.
Freezing/Melting Point: Decomposes
Decomposition Temperature: 286 deg C
Solubility: Soluble in water.
Specific Gravity/Density: 1.4
Molecular Formula: (C₂H₅)₄NBr
Molecular Weight: 210.0507

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen bromide, nitrogen, ammonia, amines.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: 
CAS# 71-91-0: BS5950000
LD₅₀/LC₅₀:
CAS# 71-91-0:
   Oral, mouse: LD₅₀ = >2 gm/kg;

Carcinogenicity:
CAS# 71-91-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: No data available.
Mutagenicity: No data available.
Neurotoxicity: No data available.
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series**: None listed.

**RCRA U-Series**: None listed.

### Section 14 - Transport Information

| IATA |  
|------|---
| **Shipping Name:** | Not regulated as a hazardous material  
| **Hazard Class:** | 
| **UN Number:** | 
| **Packing Group:** | 

### Section 15 - Regulatory Information

- **Hazard Symbols**: Not available.
- **Risk Phrases**: 
- **Safety Phrases**: 

### Section 16 - Additional Information

**MSDS Creation Date**: 12/12/1997  
**Revision #3 Date**: 10/03/2005

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