Material Safety Data Sheet
Tetraethylammonium Bromide

ACC# 22935

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Tetraethylammonium Bromide  
**Catalog Numbers:** O4602 500, O4602-500, O4602500  
**Synonyms:** ETAMBRO; TEAB; Tetraethylammonium Bromide.  
**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410  
For information, call: 201-796-7100  
Emergency Number: 201-796-7100  
For CHEMTREC assistance, call: 800-424-9300  
For International CHEMTREC assistance, call: 701-527-3887

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 applicable.  
**Upper:** Not available.  
**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

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.

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.

### 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>

**OSHA Vacated PELs**: Ethanaminium, n,n,n-triethyl-, bromide: No OSHA Vacated PELs are listed for this chemical.

**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.
- **Respirators**: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

### 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.
- **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#**: BS5950000
- **LD50/LC50**: oral, mouse: LD50 = >2 gm/kg
- **Carcinogenicity**: 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

<table>
<thead>
<tr>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>Not regulated as a hazardous material</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
</tr>
<tr>
<td>Packing Group:</td>
<td></td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

**US FEDERAL**

**TSCA**
- CAS# 71-91-0 is listed on the TSCA inventory.

**Health & Safety Reporting List**
- None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**
- None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**
- None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**
- None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**
- None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**
- None of the chemicals in this product have a TPQ.

**SARA Codes**
- CAS # 71-91-0: immediate.

**Section 313**
- No chemicals are reportable under Section 313.

**Clean Air Act**
- This material does not contain any hazardous air pollutants.
- This material does not contain any Class 1 Ozone depleters.
- This material does not contain any Class 2 Ozone depleters.

**Clean Water Act**
- None of the chemicals in this product are listed as Hazardous Substances under the CWA.
- None of the chemicals in this product are listed as Priority Pollutants under the CWA.
- None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA**
- None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**
- CAS# 71-91-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**
- California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**
- Hazard Symbols: Not available.
- Risk Phrases:

**Safety Phrases:**
- **WGK (Water Danger/Protection)**
  - CAS# 71-91-0: 3
- **Canada - DLS/NDSL**
  - CAS# 71-91-0 is listed on Canada's DSL List.
- **Canada - WHMIS**
  - This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

Section 16 - Additional Information

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

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other...
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