Material Safety Data Sheet
Date Printed: 08/31/2000
Date Updated: 10/20/1999
Version 1.0

Section 1 - Product and Company Information

Product Name: ETHIDIUM BROMIDE
Product Number: E8751
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: St. Louis, MO, 63103, US
Technical Phone: 314 771 5765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext.5996

Section 2 - Composition/Information on Ingredient

Substance Name: ETHIDIUM BROMIDE
CAS #: 1239-45-8
SARA 313: No

Formula: C21H20N3.Br
Synonyms: 2,7-Diamino-10-ethyl-9-phenylphenanthridinium bromide, 3,8-Diamino-5-ethyl-6-phenylphenanthridinium bromide, 2,7-Diamino-9-phenyl-10-ethylphenanthridinium bromide, 2,7-Diamino-9-phenylphenanthridine ethobromide, Dromilac, Ethidium bromide, Homidium bromide, RD 1572

Section 3 - Hazards Identification

Emergency Overview
Toxic.
May cause heritable genetic damage. Irritating to eyes, respiratory system, and skin.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A
Flammability: N/A
Extinguishing Media
Suitable
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)
Emits toxic fumes under fire conditions.

Exposure Hazard(s)
Material
Irritant.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Do not breathe dust. Do not get in eyes, on skin, on clothing.

Storage
Suitable
Keep tightly closed. Store in a cool dry place.

Section 8 - Exposure Controls / PPE

Engineering Controls
Use only in a chemical fume hood.

Personal Protective Equipment
Other
Wear appropriate NIOSH/MSHA-approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

General Hygiene Measures
Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance
Physical State
Solid

Molecular Weight: 394.32 AMU

Property Value
pH N/A
BP/BP Range N/A
MP/MP Range 260 - 262 °C
Freezing Point N/A
Vapor Pressure N/A
Vapor Density | N/A
Saturation Vapor Conc. | N/A
SG/Density | N/A
Bulk Density | N/A
Odor Threshold | N/A
Volatile% | N/A
VOC Content | N/A
Water Content | N/A
Solvent Content | N/A
Evaporation Rate | N/A
Viscosity | N/A
Partition Coefficient | N/A
Decomposition Temp. | N/A
Flash Point °F | N/A
Flash Point °C | N/A
Explosion Limits | N/A
Autoignition Temp | N/A
Solubility | N/A

Section 10 - Stability and Reactivity

Stability
Stable

Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen bromide gas.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Inhalation
Material is irritating to mucous membranes and upper respiratory tract.

Multiple Routes
May be harmful by inhalation, ingestion, or skin absorption. Causes eye and skin irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: SF7950000

Toxicity Data
Subcutaneous - Mouse: 110 MG/KG (LD50)
### Chronic Exposure - Mutagen

<table>
<thead>
<tr>
<th>Species</th>
<th>Dose</th>
<th>Route</th>
<th>Exposure Time</th>
<th>Cell Type</th>
<th>Mutation test</th>
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<td>2 UMOL/L</td>
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<td>DNA</td>
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<td>200 UMOL/L</td>
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<td>liver</td>
<td>DNA inhibition</td>
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<td>Ascites tumor</td>
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<td>Intraperitoneal</td>
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<td>mammary gland</td>
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<td>DNA inhibition</td>
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<tr>
<td>Mouse</td>
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<td>30M</td>
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<tr>
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<td>leucocyte</td>
<td>Other mutation test systems</td>
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<td>DNA inhibition</td>
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<tr>
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<td>Mouse</td>
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<td>fibroblast</td>
<td>Cytogenetic analysis</td>
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<td>Mouse</td>
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<td>leucocyte</td>
<td>Cytogenetic analysis</td>
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<tr>
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<td>30M</td>
<td>fibroblast</td>
<td>DNA damage</td>
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<td>ovary</td>
<td>Cytogenetic analysis</td>
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<td>Cytogenetic analysis</td>
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<td>leukocyte</td>
<td>DNA damage</td>
</tr>
<tr>
<td>Bird</td>
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<td>liver</td>
<td>DNA damage</td>
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<tr>
<td>Bird</td>
<td>1 MMOL/L</td>
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</tbody>
</table>

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### Section 12 - Ecological Information

### Section 13 - Disposal Considerations

**Appropriate Method of Disposal of Substance or Preparation**
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

### Section 14 - Transport Information

**DOT**

- **Proper Shipping Name:** None
- **Non-Hazardous for Transport:** This substance is considered to be non-hazardous for transport.

**IATA**

- **Proper Shipping Name:** None
- **Non-Hazardous for Air Transport:** Non-hazardous for air transport.
Section 15 - Regulatory Information

US Classification and Label Text
Indication of Danger
Toxic.
Risk Statements
May cause heritable genetic damage. Irritating to eyes, respiratory system, and skin.
Safety Statements
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not breathe dust. Wear suitable protective clothing, gloves, and eye/face protection.

United States Regulatory Information
SARA 313 Listed: No

Section 16 - Other Information

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 1999 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.