SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 08/31/2000
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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
Emergency Phone:	414 273 3850 Ext.5996
Fax	800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
ETHIDIUM BROMIDE	1239-45-8	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
Saturated 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

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

Species	*Dose*	*Route*	*Exposure Time*	*Cell Type*	*Mutation test*
Human	2 UMOL/L			fibroblast	DNA
Human	5 MG/L			leukocyte	DNA damage
Human	40 UMOL/L			HeLa cell	DNA inhibition
Rat	40 MG/L			Other cell types	DNA damage
Rat	200 UMOL/L			liver	DNA
Rat	2500 NMOL/L			liver	Unscheduled DNA synthesis
Rat	500 NMOL/L			liver	DNA inhibition
Rat	10 MG/L			liver	Sister chromatid exchange
Mouse	117 UMOL/L			Ascites tumor	DNA damage
Mouse	100 NMOL/L			mammary gland	DNA damage
Mouse	100 MG/KG	Intraperitoneal			DNA inhibition
Mouse	500 UMOL/L			Other cell types	DNA inhibition
Mouse	500 UMOL/L			leukocyte	DNA inhibition
Mouse	500 UMOL/L			leukocyte	Other mutation test systems
Mouse	100 UMOL/L			lymphocyte	DNA inhibition
Mouse	100 UMOL/L			lymphocyte	Other mutation test systems
Mouse	1 MG/L			fibroblast	Cytogenetic analysis
Mouse	5 MG/L			leukocyte	Cytogenetic analysis
Mouse	10 MG/L			Other cell types	Cytogenetic analysis
Mouse	80 MG/KG	Intravenous			Sister chromatid exchange
Hamster	10 MG/L		30M	fibroblast	DNA damage
Hamster	10 MG/L			ovary	Cytogenetic analysis
Hamster	10 MG/L			fibroblast	Cytogenetic analysis
Hamster	41 MG/L			lung	Cytogenetic analysis
Hamster	10 MG/L			lung	Sister chromatid exchange
Hamster	75 UMOL/L			lung	Mutation in mammalian somatic cells.
Hamster	45 MG/L			ovary	Mutation in mammalian somatic cells.
Bird (wild)	37500 NMOL/L			leukocyte	DNA
Bird	1 MMOL/L			leukocyte	DNA damage
Bird	1 MMOL/L			liver	DNA damage
Bird	1 MMOL/L			Other cell types	DNA damage
Chicken	847 UG/KG	Parenteral			Sister chromatid exchange

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.