

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ethidium bromide
Product Number : E8751
Brand : Sigma-Aldrich
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 3,8-Diamino-5-ethyl-6-phenylphenanthridinium bromide
EtBr
Homidium bromide
Formula : C₂₁H₂₀N₃.Br
Molecular Weight : 394.32 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
3,8-Diamino-1-ethyl-6-phenylphenanthridinium bromide			
1239-45-8	214-984-6	-	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Highly toxic by inhalation
Harmful by ingestion.
Irritant
Mutagen

HMIS Classification

Health Hazard: 4
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 4
Fire : 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation	May be fatal if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.
Eyes	May cause eye irritation.
Ingestion	Harmful if swallowed.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point no data available

Ignition temperature no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form powder

Colour dark red

Safety data

pH 4.0 - 7 at 20 g/l at 25 °C (77 °F)

Melting point 260 - 262 °C (500 - 504 °F)

Boiling point no data available

Flash point no data available

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Water solubility no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO_x), Hydrogen bromide gas

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 1,503 - 2,177 mg/kg

LC50 Inhalation - rat - 1 h - 11.8 - 134.0 mg/m³

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Genotoxicity in vitro - rat - Other cell types
DNA damage

Genotoxicity in vitro - rat - Liver
DNA damage

Genotoxicity in vivo - mouse - Intraperitoneal
DNA inhibition

Genotoxicity in vivo - mouse - Intravenous
Sister chromatid exchange

Laboratory experiments have shown mutagenic effects.

Potential Health Effects

Inhalation	May be fatal if inhaled. May cause respiratory tract irritation.
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Eyes	May cause eye irritation.
Ingestion	Harmful if swallowed.

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN-Number: 2811 Class: 6.1 Packing group: I
Proper shipping name: Toxic solids, organic, n.o.s. (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide)

IMDG

UN-Number: 2811 Class: 6.1 Packing group: I EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide)
Marine pollutant: No

IATA

UN-Number: 2811 Class: 6.1 Packing group: I
Proper shipping name: Toxic solid, organic n.o.s. (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide)
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION**OSHA Hazards**

Highly toxic by inhalation, Harmful by ingestion., Irritant, Mutagen

TSCA Status

Not On TSCA Inventory

3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide

CAS-No.
1239-45-8

DSL Status

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide

CAS-No.
1239-45-8

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No Components Listed

Pennsylvania Right To Know Components

3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide

CAS-No. Revision Date
1239-45-8

New Jersey Right To Know Components

3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide

CAS-No. Revision Date
1239-45-8

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Further information

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