

SIGMA-ALDRICH

Material Safety Data Sheet

sigma-aldrich.com
Version 4.1
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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. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Highly toxic by inhalation, Harmful by ingestion., Mutagen

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.

H330

Fatal if inhaled.

H341

Suspected of causing genetic defects.

Precautionary statement(s)

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P281

Use personal protective equipment as required.

P284

Wear respiratory protection.

P310

Immediately call a POISON CENTER or doctor/physician.

HMS Classification

Health hazard:

3

Chronic Health Hazard:

*

Flammability:

0

Physical hazards:

0

NFPA Rating

4

Health hazard:

0

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms

: EIBr
3,8-Diamino-5-ethyl-6-phenylphenanthridinium bromide
Homidium bromide

Formula

: C₂₁H₂₀BrN₃

Molecular Weight

: 394.31 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
3,8-Diamino-1-ethyl-6-phenylphenanthridinium bromide			
1239-45-8	214-984-6	612-278-00-6	-

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

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 and materials for containment and cleaning up

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

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

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

Keep in a dry place.

00001033

8. EXPOSURE CONTROL/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 N100 (US) or type P3 (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

Face shield and 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 - 7 at 25 °C (77 °F)

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

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

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

no data available

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), 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 mg/l

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LD50 Subcutaneous - mouse - 110 mg/kg
LD50 Intravenous - rat - 16 mg/kg

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Carcinogenicity

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.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be fatal if inhaled. May cause respiratory tract irritation.

Ingestion Harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.

Eyes May cause eye irritation.

Additional information

RTECS: SF7950000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

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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-phenylphenanthridinium bromide)

Marine pollutant: No

Poison Inhalation Hazard: No

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-phenylphenanthridinium 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-phenylphenanthridinium bromide)

IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards

Highly toxic by inhalation, Harmful by ingestion, Mutagen

DSL Status

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

3,8-Diamino-1-ethyl-6-phenylphenanthridinium 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 are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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

CAS-No.
1239-45-8

Revision Date

New Jersey Right To Know Components

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

CAS-No.
1239-45-8

Revision Date

California Prop. 65 Components

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

16. OTHER INFORMATION

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Further Information

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The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., 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.

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