



# SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2022  
Date Updated: February 08, 2022

## SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----

**Product Name** Ethidium bromide [EB; EtBr]  
**Product Code(s)** EB0195  
**Recommended Use** For Laboratory Research Use Only  
Not for Human or Animal Drug Use

**Supplier** Bio Basic Inc.  
**Address** 20 Konrad Crescent, Markham, Ontario,  
Canada, L3R 8T4  
**Telephone** (905) 474 4493  
**Fax** (905) 474 5794  
**For Chemical Emergency Phone#** (416) 995 9730

## SECTION 2. ----- HAZARDS IDENTIFICATION -----

### GHS Classification:

Acute toxicity, Inhalation (Category 4)  
Acute toxicity, Oral (Category 4)  
Germ cell mutagenicity (Category 2)



### Pictogram:

**Signal Word:** WARNING

### HAZARD STATEMENT(S):

H302: Harmful if swallowed.  
H341: Suspected of causing genetic defects.

### PRECAUTIONARY STATEMENT(S) :

P202: Do not handle until all safety precautions have been read and understood.  
P260: Do not breath dust/spray/ fume/gas/ mist/ vapors.  
P264: wash skin thoroughly after handling P270: Do not drink, eat, smoke, when using this product.  
P271: Use only outdoors or in well-ventilated area. P405: Store locked up.  
P281: Use PPE as required. P284: Wear respiratory protection.  
P301 + P312:If Swallowed: Call Poison Center or doctor/physician if you feel unwell  
P304 + P340: If inhaled: remove to fresh air and keep at rest in a position comfortable for breathing.  
P310: Immediately Call Poison Center or doctor/physician if you feel unwell  
P320: Specific treatment is urgent (see supplemental first aid instructions)  
P403 + P233: Store in a well ventilated place. Keep container tightly closed.  
P501: Dispose of contents/container to an approved waste disposal plant.

**HMIS Classification:** Health hazard 4, Flammability 0, Physical hazards 0

**NFPA Rating:** Health hazard 4, Fire 0, Reactivity hazard 0

**Potential Health Effects**

**Eye:** Risk of serious damage to eyes.

**Skin:** Harmful in contact with skin.

**Ingestion:** Harmful if swallowed.

**Inhalation:** Harmful by inhalation.

**SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----**

| <b>Chemical Name</b>                                | <b>EC No.</b> | <b>CAS-No</b> | <b>Weight %</b> |
|---|---------------|---------------|-----------------|
| 3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide | 214-984-6     | 1239-45-8     | 90-100          |

**SECTION 4. ----- FIRST-AID MEASURES -----**

**Eyes:** rinse immediately with plenty of water and seek medical advice.

**Skin:** Rinse with plenty of soap & water and seek medical advice.

**Ingestion:** Do not induce vomiting without medical advice. Rinse with water. Consult physician.

**Inhalation:** Move to fresh air. Consult a physician.

**Physician:** Treat symptomatically & 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Runoff may cause pollution.

**Extinguishing Media:** In case of fire use water spray to cool fire expose containers. Use water spray, dry chemical, Carbon dioxide, or appropriate foam. Use agent most appropriate to extinguish fire.

**Flash Point:** Not available.

**Auto-ignition Temperature:** Not available.

**Explosion Limits:** Not available.

**SECTION 6. ----- ACCIDENTAL RELEASE MEASURES -----**

**General Information:** Use proper PPE as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not let product enter drains.

**SECTION 7. ----- HANDLING AND STORAGE -----**

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION -----**

**Engineering Controls:** Facilities utilizing this material should be equipped with an eyewash facility and safety shower. Use adequate ventilation to keep airborne concentrations low.

| <u>Chemical Name</u> | <u>ACGIH</u> | <u>NIOSH</u> | <u>OSHA - Final / Vacated PEL's</u> |
|----------------------|--------------|--------------|-------------------------------------|
| Ethidium bromide     | None listed  | None listed  | None listed                         |

**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. Full-face particle respirator.

**Skin:** Wear appropriate protective gloves to prevent skin exposure. 0.11 mm thick nitrile.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

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

## SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

**Physical State:** powder

**Appearance:** Red to purple

**Odor:** Not available.

**pH:** 4-7 at 25°C(77°F)

**Melting Point:** 260 - 262° C (500-504°F)

**Vapor Pressure:** No data available.

**Viscosity:** No data available.

**Vapor Density:** No data available.

**Evaporation Rate:** Not available.

**Boiling Point:** Not available.

**Decomp Temp:** Not available.

**Solubility:** (in water): Soluble.

**Specific Gravity/Density:** Not available.

## SECTION 10. -----STABILITY AND REACTIVITY -----

**Chemical Stability:** Stable at room temp. in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Incompatible materials, heat.

**Incompatibilities:** Strong oxidizing agents.

**Hazardous Decomposition Products:** see section 5

## SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

**RTECS:** SF7950000 **LD50:** Oral, mouse: 1000 mg/kg

Oral, rat: LD50 = 1,503 – 2,177 mg/kg

**Carcinogenicity:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Mutagenicity:** Ames-test: positive

## SECTION 12. ----- ECOLOGICAL INFORMATION -----

**Environmental Fate:** 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. Contact a licensed professional waste disposal service to dispose of this material.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

### SECTION 14. ----- TRANSPORT INFORMATION -----

**DOT:** UN 2811, Toxic solids, organic, n.o.s., (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide), 6.1, II

**IMDG:** UN 2811, TOXIC SOLID, ORGANIC, N.O.S., (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide), 6.1, II,  
EMS-No. F-A, S-A.

**IATA:** UN 2811, Toxic solid, organic, n.o.s., (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide),  
6.1, II

### SECTION 15. ----- REGULATORY INFORMATION -----

**SARA 311/312:** Acute Health Hazard, Chronic Health Hazard

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

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

**STATE** CAS# 1239-45-8 is not present on state lists from CA, MN, MA, FL.

**Pennsylvania Right to Know:** 2,8-Diamino-1-ethyl-6-phenylphenantridinium bromide CAS#1239-45-8

**New Jersey Right to Know:** 2,8-Diamino-1-ethyl-6-phenylphenantridinium bromide CAS#1239-45-8

California Prop.65 components: None of the chemicals are known to cause cancer, birth defects, or any other reproductive harm.

#### **EUROPEAN/INTERNATIONAL REGULATIONS European Labeling in Accordance with EC Directives**

**Hazardous Symbols:** T+ Very toxic

**WGK (Water Danger/Protection)** CAS# 1239-45-8: 2

**Canada - DSL/NDSL**CAS# 1239-45-8 is not listed on Canada's DSL List.

**Canada - WHMIS:** Not available.

CAS# 1239-45-8 is not listed on Canada's Ingredient Disclosure List.

### SECTION 16. ----- OTHER INFORMATION -----

Further information: no limited for paper copy, just for internal uses.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

#### **Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**Issuing Date:** 08-February-2022

**End of SDS**