

Material Safety Data Sheet

Printing date 08/01/2011

Reviewed on 07/02/2011

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Ethidium Bromide solution
- **Catalog or product number:** 1610433, 9703276, 9702652, 1610433EDU
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:** Technical services, customer support.
- **Emergency telephone number:**
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Composition/information on ingredients



- **Chemical characterization:** Substances
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

1239-45-8	ethidium bromide	T+ R26 Xn R22-68 Muta. Cat. 3	0.1-1.0%
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- **Additional information** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Toxic by inhalation.
 T; Toxic
R23: Toxic by inhalation.
-  Xn; Harmful
R68: Possible risk of irreversible effects.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

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· **Label elements**· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

T Toxic

· **Risk phrases:**

23 Toxic by inhalation.

68 Possible risk of irreversible effects.

· **Safety phrases:**

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

60 This material and its container must be disposed of as hazardous waste.

· **Emergency overview:**· **Routes of exposure:** Inhalation* **4 First aid measures**· **General information**

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact** Immediately wash with water and soap and rinse thoroughly.· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.· **After swallowing** Induce vomiting and call for medical help.* **5 Firefighting measures**· **Suitable extinguishing agents**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture** No further relevant information available.· **Protective equipment:**

Mount respiratory protective device.

Wear self-contained respiratory protective device.

* **6 Accidental release measures**· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment (See section 8). Keep unprotected persons away.

· **Environmental precautions:** Dilute with plenty of water.· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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- **Reference to other sections**

- See Section 7 for information on safe handling

- See Section 8 for information on personal protection equipment.

- See Section 13 for disposal information.

7 Handling and storage

- **Handling**

- **Precautions for safe handling**

- Ensure good ventilation/exhaustion at the workplace.

- Open and handle receptacle with care.

- **Information about protection against explosions and fires:** Keep respiratory protective device available.

- **Storage**

- **Requirements to be met by storerooms and receptacles:** According to product specification

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:** Keep receptacle tightly sealed.

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

- The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures**

- Keep away from foodstuffs, beverages and feed.

- Immediately remove all soiled and contaminated clothing

- Wash hands before breaks and at the end of work.

- Store protective clothing separately.

- **Breathing equipment:** Not required.

- **Protection of hands:** Protective gloves.

- **Material of gloves** Synthetic gloves

- **Penetration time of glove material**

- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Safety glasses

9 Physical and chemical properties

- **General Information**

- **Appearance:**

- Form:** liquid

- Color:** Colorless

- **Odor:** Odorless

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

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· Change in condition	
Melting point/Melting range:	0°C
Boiling point/Boiling range:	100°C
· Flash point:	Not applicable
· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20°C:	23 hPa
· Density at 20°C:	1.00001 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Water:	99.0 %
Solids content:	0.1 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.

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· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic

· **Target organs:** Respiratory tract.

12 Ecological information

- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Hand over to hazardous waste disposers.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|-------------------------------------|--|
| · UN-Number | |
| · DOT | UN2810 |
| · ADR, IMDG, IATA | 2810 |
| · UN proper shipping name | |
| · DOT, IMDG, IATA | TOXIC LIQUID, ORGANIC, N.O.S. (Ethidium Bromide Solution) |
| · ADR | 2810 TOXIC LIQUID, ORGANIC, N.O.S. (Ethidium Bromide Solution) |
| · Transport hazard class(es) | |
| · DOT, IMDG, IATA | |
| · Class | 6.1 Toxic substances. |
| · Label | 6.1 |
| · ADR | |
| · Class | 6.1 Toxic substances |
| · Label | 6.1 |

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- | | |
|--|---------------------------|
| · Packing group | III |
| · DOT, ADR, IMDG, IATA | |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Warning: Toxic substances |
| · Danger code (Kemler): | 60 |
| · EMS Number: | F-A,S-A |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

7732-18-5 | water

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

1239-45-8 | ethidium bromide

3B

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

T Toxic

· **Risk phrases:**

23 Toxic by inhalation.

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68 Possible risk of irreversible effects.

· **Safety phrases:**

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

60 This material and its container must be disposed of as hazardous waste.

· **National regulations**· **Technical instructions (air):**

Class	Share in %
I	0.1-1.0

· **Water hazard class:** Generally not hazardous for water.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental Health and Safety.· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· *** Data compared to the previous version altered.**