

Safety data sheet

according to 1907/2006/EC, Article 31 as amended

Printing date 08.02.2024

Version number 4

Revision: 08.02.2024

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

- **1.1 Product identifier**
- **Trade name:** Ethidium Bromide solution 10mg/ml
- **Article number:**
30-30-01
30-30-02
- **Registration number** Mixture
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU24 Scientific research and development
- **Product category** PC21 Laboratory chemicals
- **Application of the substance / the mixture** Laboratory chemicals
- **Uses advised against**
Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).
Any use involving significant release of aerosol, vapour or dust in the breathing zone of workers where they are exposed without suitable respiratory protective equipment (RPE).
Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.
The product is strictly intended for industrial or professional use only.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Severn Biotech Ltd.
Unit 2,
Park Lane,
Kidderminster,
Worcestershire.
DY11 6TJ
UK
Tel: 0044 1562 825286
Fax: 0044 1562 825284
email: info@severnbiotech.com
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms** GHS06, GHS08
- **Signal word** Danger

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- **Hazard-determining components of labelling:**

Ethidium bromide

- **Hazard statements**

H331 Toxic if inhaled.

H341 Suspected of causing genetic defects.

- **Precautionary statements**

P260 Do not breathe mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

- **Description:** Aqueous solution of the substance(s) listed below.

- **Dangerous components:**

CAS: 1239-45-8	Ethidium bromide	1%
EINECS: 214-984-6	☠ Acute Tox. 2, H330; ☠ Muta. 2, H341; ⚠ Acute Tox. 4, H302	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.

- **After inhalation:**

Call a doctor immediately.

In case of inhalation:

- Provide fresh air.

- In case of breathing difficulties administer oxygen.

- No mouth-to-mouth or mouth-to-nose resuscitation. Use respiratory bag or oxygen resuscitation apparatus.

- Do not leave patient unattended.

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

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

- **After eye contact:**

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

- **Information for doctor:** Treat symptomatically and supportively.

- **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Hydrogen bromide
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow product to reach sewage system or any water course in the undiluted form.
Inform respective authorities in case of seepage into water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Contaminated absorbent material may pose the same hazard as the spilt product.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Safety showers and eye wash facilities should be available at the work area.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.

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- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from oxidising agents.
- **Further information about storage conditions:**
 - Store in a banded area.
 - Protect from frost.
 - Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** 6.1 D
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see section 7.
- **Ingredients 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 valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Do not eat, drink, smoke or sniff while working.
 - Do not inhale gases / fumes / aerosols.
 - A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.
 - Ensure that eyewash stations and safety showers are close to the workstation location.
 - 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.
- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves.
Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **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 with side-shields conforming to EN166.
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

- **Body protection:**



Impervious protective clothing

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Body protection must be chosen depending on product properties, activity and possible exposure.

- **Limitation and supervision of exposure into the environment**

Do not allow to enter drains, sewers or watercourses.

- **Risk management measures**

The operators shall be instructed adequately.

The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid

Colour: Red

- **Odour:** Mild

- **Odour threshold:** Not determined.

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

- **Change in condition**

Melting point/freezing point: approx. 0 °C

Initial boiling point and boiling range: approx. 100 °C

- **Flash point:** Not applicable.

- **Flammability (solid, gas):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** Product is not self-igniting.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapour pressure at 20 °C:** 23 hPa

- **Density at 20 °C:** 1.0 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with water:**

Fully miscible.

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

- **Solvent content:**

VOC (EC) 0.00 %

- **9.2 Other information**

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Strong acids and oxidising agents
- **10.6 Hazardous decomposition products:**
Hydrogen bromide
Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Toxic if inhaled.

- **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	50,000 mg/kg
Inhalative	LC50/4 h	5 mg/l

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**
Suspected of causing genetic defects.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** The organic portion of the product is biodegradable.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;

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- Recycle, if possible; or

- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

- **European waste catalogue**

Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

- **Uncleaned packaging:**

- **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR/RID/ADN, IMDG, IATA**

UN3287

- **14.2 UN proper shipping name**

- **ADR/RID/ADN**

UN3287 TOXIC LIQUID, INORGANIC, N.O.S.
(Ethidium bromide)

- **IMDG, IATA**

TOXIC LIQUID, INORGANIC, N.O.S. (Ethidium bromide)

- **14.3 Transport hazard class(es)**

- **ADR/RID/ADN, IMDG, IATA**



- **Class**

6.1 Toxic substances.

- **Label**

6.1

- **14.4 Packing group**

- **ADR/RID/ADN, IMDG, IATA**

III

- **14.5 Environmental hazards:**

- **Marine pollutant:**

No

- **14.6 Special precautions for user**

Warning: Toxic substances.

- **Hazard identification number (Kemler code):**

60

- **EMS Number:**

F-A,S-A

- **Stowage Category**

A

- **Stowage Code**

SW2 Clear of living quarters.

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

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· **Transport/Additional information:**

· **ADR/RID/ADN**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

2

· **Tunnel restriction code**

E

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 3287 TOXIC LIQUID, INORGANIC, N.O.S. (ETHIDIUM BROMIDE), 6.1, III

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Poisons Act**

· **Regulated explosives precursors**

None of the ingredients is listed.

· **Regulated poisons**

None of the ingredients is listed.

· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

None of the ingredients is listed.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category H2**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

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· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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.

· Relevant phrases

H302 Harmful if swallowed.

H330 Fatal if inhaled.

H341 Suspected of causing genetic defects.

· Department issuing SDS: Product safety department.**· Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Muta. 2: Germ cell mutagenicity – Category 2

· * Data compared to the previous version altered.

GB