

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

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

1.1 Product identifier**Trade name:** Ethidium Bromide Powder**Product Code:** 30-31-10**CAS Number:**
1239-45-8**EC number:**
214-984-6**Index number:**
612-278-00-6**1.2 Relevant identified uses of the substance or mixture and uses advised against****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**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 GB-CLP**

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 2 H330 Fatal if inhaled.

Muta. 2 H341 Suspected of causing genetic defects.

2.2 Label elements**Labelling according to GB-CLP** The substance is classified and labelled according to the GB CLP regulation.

(Contd. on page 2)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 1)

· Hazard pictograms



GHS06 GHS08

· Signal word Danger

· Hazard statements

H302 Harmful if swallowed.

H330 Fatal if inhaled.

H341 Suspected of causing genetic defects.

· Precautionary statements

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

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

P284 [In case of inadequate ventilation] wear respiratory protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local regulations.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Substances

· CAS No. Description

CAS: 1239-45-8 Ethidium bromide

· Identification number(s)

· **EC number:** 214-984-6

· **Index number:** 612-278-00-6

* SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Remove from exposure to fresh air.

If breathing is difficult, give oxygen. If not breathing, give artificial respiration, preferably mouth to mouth. Seek medical advice.

Do not use mouth-to-mouth ventilation if exposure has been via the oral route (mouth) and/or inhalation. Only induce artificial respiration with a proper respiratory medical device such as a portable pocket mask equipped with a one-way valve or bag valve mask.

DO NOT DELAY! Refer immediately for medical attention.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 3)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 2)

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:**

Wash mouth out with water

Do not induce vomiting; call for medical help immediately.

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

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **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**

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Hydrogen bromide

Nitrogen oxides (NO_x)

· **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**

Avoid formation of dust.

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

Keep ignition sources away - no smoking.

· **6.2 Environmental precautions:**

Do not allow to enter sewers/ surface or ground water.

Do not allow to penetrate the ground/soil.

Inform respective authorities in case of seepage into water course or sewage system.

· **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Ensure adequate ventilation.

Send for recovery or disposal in suitable receptacles.

(Contd. on page 4)

GB

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 3)

· 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**

- Prevent formation of dust.
- Ensure good ventilation/exhaustion at the workplace.
- Open and handle receptacle with care.
- Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
- Laboratories should be equipped with suitable exhaust ventilation and fume cupboards.
- Whenever possible, carcinogenic and mutagenic substances should only be used in closed apparatus. If release of the substance cannot be prevented, then it should be extracted at the point of exit.

· Information about fire - and explosion protection:

- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- 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.**· Information about storage in one common storage facility:**

- Store away from foodstuffs.
- Store away from oxidising agents.

· Further information about storage conditions:

- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- Store in a bonded area.

· Storage class: 6.1 B**· 7.3 Specific end use(s)** No further relevant information available.*** SECTION 8: Exposure controls/personal protection****· 8.1 Control parameters**

- Ingredients with limit values that require monitoring at the workplace:** Not required.
- Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

- Appropriate engineering controls** No further data; see section 7.
- Individual protection measures, such as 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.
 - Avoid contact with the eyes and skin.
 - Do not eat, drink, smoke or sniff while working.
 - Do not breathe dust

(Contd. on page 5)

GB

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 4)

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.

- **Respiratory protection:** Handle product in a fume cupboard.
- **Hand protection**



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.

- **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/face protection**



Tightly sealed goggles conforming to EN166.

- **Body protection:**



Protective work clothing

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by the product. Suitable protective equipment may include: Chemical resistant boots, Chemical resistant apron, Full chemical protective suit with a hood, Chemical protective suit consisting of a jacket and trousers. The jacket should be buttoned up to the neck, sleeves sealed at the gloves, and trouser legs worn outside the boots. These precautions are required to prevent the clothing from accidentally trapping product against the skin.

- **Environmental exposure controls** 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**

- | | |
|---|---------------------------|
| · Physical state | Solid |
| · Colour: | Red |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |
| · Melting point/freezing point: | 261 – 264 °C |
| · Boiling point or initial boiling point and boiling range | Undetermined. |
| · Flammability | Product is not flammable. |
| · Lower and upper explosion limit | |
| · Lower: | Not determined. |

(Contd. on page 6)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 5)

· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH	Not applicable.
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water:	Not determined.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	1.01 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· 9.2 Other information	
· Appearance:	
· Form:	Powder
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product is not explosive. However, formation of explosive air/dust mixtures are possible.
· Molecular weight	394.32 g/mol
· Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	
· Explosives	Not applicable
· Flammable gases	Not applicable
· Aerosols	Not applicable
· Oxidising gases	Not applicable
· Gases under pressure	Not applicable
· Flammable liquids	Not applicable
· Flammable solids	Not applicable
· Self-reactive substances and mixtures	Not applicable
· Pyrophoric liquids	Not applicable
· Pyrophoric solids	Not applicable
· Self-heating substances and mixtures	Not applicable
· Substances and mixtures, which emit flammable gases in contact with water	Not applicable
· Oxidising liquids	Not applicable
· Oxidising solids	Not applicable
· Organic peroxides	Not applicable
· Corrosive to metals	Not applicable
· Desensitised explosives	Not applicable

* SECTION 10: Stability and reactivity

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

(Contd. on page 7)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 6)

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**

There is a risk of a dust explosion if the following conditions are met:

 - The substance is given in very finely distributed form (powder, dust).
 - The substance is whirled up in sufficient quantity in the air.
 - An ignition source is present (flame, spark, electrostatic discharge, etc.)

No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat and static discharge.
- **10.5 Incompatible materials:** Strong acids and oxidising agents
- **10.6 Hazardous decomposition products:**

Hydrogen bromide
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)

* SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**

Harmful if swallowed.
Fatal if inhaled.
- **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.
- **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.
- **Additional toxicological information:**

ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

(Contd. on page 8)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 7)

- **12.7 Other adverse effects**
- **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.

* SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- 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.

- **Uncleaned packaging:**

- **Recommendation:**

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

Disposal must be made according to official regulations.

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

SECTION 14: Transport information

- **14.1 UN number or ID number**

· **ADR/RID/ADN, IMDG, IATA** UN2811

- **14.2 UN proper shipping name**

· **ADR/RID/ADN** UN2811 TOXIC SOLID, ORGANIC, N.O.S. (Ethidium bromide)

· **IMDG, IATA** TOXIC SOLID, ORGANIC, N.O.S. (Ethidium bromide)

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

· **ADR/RID/ADN**



· **Class**

6.1 (T2) Toxic substances.

· **Label**

6.1

(Contd. on page 9)

— GB —

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended


Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 8)

· IMDG, IATA	
	
· Class	6.1 Toxic substances.
· Label	6.1
· 14.4 Packing group	
· ADR/RID/ADN, IMDG, IATA	I
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Toxic substances.
· Hazard identification number (Kemler code):	66
· Hazchem Code:	2X
· EMS Number:	F-A,S-A
· Stowage Category	B
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E5 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 300 g
· Transport category	1
· Tunnel restriction code	C/E
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E5 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 300 g
· UN "Model Regulation":	UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (ETHIDIUM BROMIDE), 6.1, I

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Substance is not listed.
- **Control Of Major Accident Hazards Regulations 2015 (COMAH)**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **COMAH category** H2

(Contd. on page 10)

Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 09.09.2025

Version number 2 (replaces version 1)

Revision: 09.09.2025

Trade name: Ethidium Bromide Powder

(Contd. of page 9)

- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **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.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Training hints**

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

- **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

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

Muta. 2: Germ cell mutagenicity – Category 2

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