

SAFETY DATA SHEET

Version:	1.1
Revision Date:	2021-04-14
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product Number:	E0057
Product name:	Ethidium bromide solution, 1% in H ₂ O
CAS Registry Nr:	1239-45-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Laboratory chemicals, Manufacture of substances.
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1.3 Details of the supplier of the safety data sheet

Company:	Chemodex AG
	CH - 9000 St. Gallen
	Switzerland, Europe
	Tel: +41 71 244 48 25
	Fax: +41 71 244 48 26
	Email: info@chemodex.com
	Website: www.chemodex.com

1.4 Emergency telephone number

Tox Info Suisse:	145 or +41 44 251 51 51
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008


Acute toxicity, Inhalation (Category 3)	H331
Germ cell mutagenicity (Category 2)	H341

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For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No. 1272/2008

Pictogram	
Signal word	Danger

Hazard statement(s)

H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.

Precautionary statement(s)

P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

2.3 Other hazards

Supplemental Hazard Statements:	none
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This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms:	3,8-Diamino-5-ethyl-6-phenylphenanthridinium bromide EtBr Homidium bromide
Mol. Formula:	C ₂₁ H ₂₀ BrN ₃
Mol. Weight:	394.31 g/mol
CAS Registry No.:	1239-45-8

Component		Classification	Concentration
Ethidium bromide			
CAS-No.	1239-45-8	Acute Tox. 4; Acute Tox. 1; Muta. 2; H302, H330, H341	>= 1 - < 10 %
EC-No.	214-984-6		
Index-No.	612-278-00-6 *		

*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off immediately all contaminated clothing. 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. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

Hydrogen bromide gas

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability

Recommended storage temperature 2 - 8 °C

Storage class

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

8.2 Exposure controls**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment**Eye/face 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).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

a)	Appearance:	Colour: Red Form: Liquid
b)	Odour:	No data available
c)	Odour Threshold:	No data available
d)	pH:	No data available
e)	Melting point/freezing point:	No data available
f)	Initial boiling point and boiling range:	No data available
g)	Flash point:	No data available
h)	Evaporation rate:	No data available
i)	Flammability (solid, gas):	No data available
j)	Upper/lower flammability or explosive limits:	No data available
k)	Vapour pressure:	No data available
l)	Vapour density:	No data available
m)	Relative density:	No data available
n)	Water solubility:	No data available
o)	Partition coefficient (n-octanol/water):	No data available
p)	Auto-ignition temperature:	No data available
q)	Decomposition temperature:	No data available
r)	Viscosity:	No data available
s)	Explosive properties:	No data available
t)	Oxidizing properties:	No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable for at least 2 years under recommended storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with:

The generally known reaction partners of water.

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Mixture:

Acute toxicity estimate Oral - > 2.000 mg/kg

(Calculation method)

Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 0,51 mg/l

(Calculation method)

Inhalation: No data available

Dermal: No data available

LD50 Subcutaneous - Mouse - 110 mg/kg (Ethidium bromide)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Evidence of genetic defects.

Suspected of causing genetic defects. (Ethidium bromide)

Test Type: Ames test

(Ethidium bromide)

Test system: Salmonella typhimurium

Result: positive

Remarks: (National Toxicology Program)

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

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Ethidium bromide)

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

After absorption: (Ethidium bromide)

We have no description of any toxic symptoms.

The following applies to aromatic amines in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discolouration of the blood).

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Components**Ethidium bromide****Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

LD50 Subcutaneous - Mouse - 110 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

Suspected of causing genetic defects.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (National Toxicology Program)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

UN number

ADR/RID:	2810	IMDG:	2810	IATA:	2810
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UN proper shipping name

ADR/RID:	TOXIC LIQUID, ORGANIC, N.O.S. (Ethidium bromide)		
IMDG:	TOXIC LIQUID, ORGANIC, N.O.S. (Ethidium bromide)		
IATA:	Toxic liquid, organic, n.o.s. (Ethidium bromide)		

Transport hazard class(es)

ADR/RID:	6.1	IMDG:	6.1	IATA:	6.1
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Packaging group

ADR/RID:	III	IMDG:	III	IATA:	III
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Environmental hazards

ADR/RID:	no	IMDG Marine pollutant:	no	IATA:	no
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14.6 Special precautions for user

No data available

14.7 Further information

No data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H302	Harmful if swallowed.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.

Further information

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The above information is believed to be correct but shall not be taken as being 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. Chemodex Ltd. and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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