

Safety Data Sheet
according to 1907/2006/EC, Article 31

Revision: 16.02.2009

Printing date 16.02.2009

1 Identification of substance**Product details****Trade name****Ethidium bromide****Stock number:**

L07482

Manufacturer/Supplier:Alfa Aesar GmbH & Co.KG
Zeppelinstrasse 7
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com**Informing department:**

Product safety department.

Emergency information:Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240**2 Hazards identification****Hazard designation:**

T+ Very toxic

Information pertaining to particular dangers for man and environmentR 22 Harmful if swallowed.
R 26 Very toxic by inhalation.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 68 Possible risk of irreversible effects.**GHS label elements****Danger**3.1/3 - Toxic if swallowed.
3.1/1 - Fatal if inhaled.
3.2/2 - Causes skin irritation.
3.3/2A - Causes serious eye irritation.
3.8/3 - May cause respiratory irritation.**Warning**

3.5/2 - Suspected of causing genetic defects.

Prevention:Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
Wear respiratory protection.**Response:**IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell. Specific treatment is urgent (see label). Specific treatment (see label). Rinse mouth.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.**Storage:****Disposal:****3 Composition/information on ingredients****Chemical characterization:**

Ethidium bromide (CAS# 1239-45-8): 100%

Designation: (CAS#)**Identification number(s):**

214-984-6

EINECS Number:**4 First aid measures****General information**Instantly remove any clothing soiled by the product.
Remove breathing apparatus only after soiled clothing has been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contactSeek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.**After eye contact**

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

After swallowing

Seek immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**
Special hazards caused by the material, its products of combustion or flue gases:CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.Can be released in case of fire:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Hydrogen bromide (HBr)**Protective equipment:**Wear self-contained breathing apparatus.
Wear full protective suit.**6 Accidental release measures****Person-related safety precautions:**Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.**Additional information:**See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.

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See Section 13 for information on disposal.

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7 Handling and storage

Handling	
Information for safe handling:	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Open and handle container with care.
Information about protection against explosions and fires:	Keep ignition sources away - Do not smoke.
Storage	
Requirements to be met by storerooms and containers:	No special requirements.
Information about storage in one common storage facility:	Store away from oxidizing agents.
Further information about storage conditions:	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Store in a locked cabinet or with access restricted to technical experts or their assistants.

8 Exposure controls and personal protection

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Components with critical values that require monitoring at the workplace:	Not required.
Additional information:	No data
Personal protective equipment	
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Store protective clothing separately. Avoid contact with the eyes and skin.
Breathing equipment:	Use breathing protection with high concentrations
Protection of hands:	Check protective gloves prior to each use for their proper condition.
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. Impervious gloves
Penetration time of glove material	Not determined
Eye protection:	Safety glasses Face protection
Body protection:	Protective work clothing.

9 Physical and chemical properties:**General Information**

Form:	Powder
Colour:	Dark red Purple
Smell:	Not determined

Change in condition	
Melting point/Melting range:	261°C (dec)
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flash point:	Not applicable
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Ignition temperature:	Not determined
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Decomposition temperature:	Not determined
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Danger of explosion:	Product is not explosive.
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Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined

Steam pressure:	Not determined
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Density	Not determined
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10 Stability and reactivity

Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Materials to be avoided:	Oxidizing agents
Dangerous reactions:	No dangerous reactions known
Dangerous products of decomposition:	Carbon monoxide and carbon dioxide Nitrous vitriol gases Hydrogen bromide

11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	1503 mg/kg (rat)
Inhalative	LC50/4H	11.8 mg/m ³ /4H (rat)

Primary irritant effect:	
on the skin:	Irritant for skin and mucous membranes.
on the eye:	Irritant effect.
Sensitization:	No sensitizing effect known.
Other information (about experimental toxicology):	Mutagenic effects have been observed on tests with bacteria. Mutagenic effects have been observed on tests with non-mammalian species cells. Mutagenic effects have been observed on tests with insects. Mutagenic effects have been observed with human fibroblast.

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Additional toxicological information:

Mutagenic effects have been observed with human leukocyte.
Mutagenic effects have been observed on tests with laboratory animals.
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations**Product:
Recommendation**

Consult state, local or national regulations for proper disposal.
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.

**Uncleaned packagings:
Recommendation:**

Disposal must be made according to official regulations.

14 Transport information**Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

ADR/RID-GGVS/E Class: 6.1 (T2) Toxic substances.
Kemler Number: 66
UN-Number: 2811
Packaging group: I
Label: 6.1
**Designation of goods:
Limited quantities (LQ)** 2811 TOXIC SOLID, ORGANIC, N.O.S. (Ethidium bromide)
Transport category LQ0
Tunnel restriction code 1
C/E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 6.1
UN Number: 2811
Label: 6.1
Packaging group: I
Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. (Ethidium bromide)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 6.1
UN/ID Number: 2811
Label: 6.1
Packaging group: I
Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. (Ethidium bromide)

UN "Model Regulation":

UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, I

15 Regulatory information**Designation according to EC guidelines:****Code letter and hazard designation of product:**

T+ Very toxic

Risk phrases:

22 Harmful if swallowed.
26 Very toxic by inhalation.
36/37/38 Irritating to eyes, respiratory system and skin.
68 Possible risk of irreversible effects.

Safety phrases:

4 Keep away from living quarters.
9 Keep container in a well-ventilated place.
20 When using do not eat or drink.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of water.
36/37 Wear suitable protective clothing and gloves.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

National regulations**Information about limitation of use:**

For use only by technically qualified individuals.
Employment restrictions concerning young persons must be observed.

Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.**Contact:** Paul V. Connolly

Abbreviations and acronyms: ADP: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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