

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 22.07.2010

Revision: 22.07.2010

1 Identification of substance

Product details

Trade name

(2-Bromoethyl)trimethylammonium bromide

Stock number:

A19398

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
Benzstrasse 3
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 Toxic

Information pertaining to particular dangers for man and environment

R 25 Toxic if swallowed.
R 37/38 Irritating to respiratory system and skin.
R 41 Risk of serious damage to eyes.

GHS label elements

**Danger**

H301 - Toxic if swallowed.

**Danger**

H318 - Causes serious eye damage.

Warning

H315 - Causes skin irritation.
H335 - May cause respiratory irritation.

Response:

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).

Storage:

P321
P405 Store locked up.

Disposal:

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

3 Composition/information on ingredients

Chemical characterization:

(2-Bromoethyl)trimethylammonium bromide (CAS# 2758-06-7)

Designation: (CAS#)

Identification number(s):

220-419-4

EINECS Number:

4 First aid measures

General information

Instantly remove any clothing soiled by the product.

After inhalation

In case of irregular breathing or respiratory arrest provide artificial respiration.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

After eye contact

Instantly wash with water and soap and rinse thoroughly.

After swallowing

Seek immediate medical advice.

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

Do not induce vomiting; instantly call for medical help.

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.

Protective equipment:

Can be released in case of fire:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
Hydrogen bromide (HBr)
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.
See Section 13 for information on disposal.

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.

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 water.
Store away from oxidizing agents.
Store away from strong bases.

Further information about storage conditions:

This product is hygroscopic.
Keep container tightly sealed.(Contd. on page 2)
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Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.
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.
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.
Avoid contact with the eyes and skin.
Use breathing protection with high concentrations.
Safety glasses
Face protection
Protective work clothing.

Breathing equipment:**Eye protection:****Body protection:****9 Physical and chemical properties:****General Information**

Form: Powder
Colour: White
Smell: Odourless

Change in condition

Melting point/Melting range: 240°C (dec)
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined

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

Lower: Not determined
Upper: Not determined

Steam pressure: Not determined**Density** Not determined**Solubility in / Miscibility with Water:**

Soluble

10 Stability and reactivity**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

Materials to be avoided:

Water/moisture
Oxidizing agents
Bases

Dangerous reactions:

No dangerous reactions known
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Hydrogen bromide
Hydrogen cyanide (prussic acid)

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

Oral LD50 450 mg/kg (mouse)
190 mg/kg (rat)

Primary irritant effect:**on the skin:**

Irritant for skin and mucous membranes.
Strong irritant with the danger of severe eye injury.

on the eye:

No sensitizing effect known.

Sensitization:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Additional toxicological information:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**Additional 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.

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(Contd. on page 3)

Trade name **(2-Bromoethyl)trimethylammonium bromide**

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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: 60
 UN-Number: 2811
 Packaging group: III
 Label: 6.1
 Designation of goods: 2811 TOXIC SOLID, ORGANIC, N.O.S. ((2-Bromoethyl)trimethylammonium bromide)
 Limited quantities (LQ): LQ9
 Transport category: 2
 Tunnel restriction code: E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 6.1
 UN Number: 2811
 Label: 6.1
 Packaging group: III
 Marine pollutant: No
 Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. ((2-Bromoethyl)trimethylammonium bromide)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 6.1
 UN/ID Number: 2811
 Label: 6.1
 Packaging group: III
 Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. ((2-Bromoethyl)trimethylammonium bromide)

UN "Model Regulation":

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

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

T Toxic

Risk phrases:

25 Toxic if swallowed.
 37/38 Irritating to respiratory system and skin.
 41 Risk of serious damage to eyes.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 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 (show the label where possible).

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

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

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:** Zachariah Holt**Abbreviations and acronyms:**

ADR: 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)
 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 Labelling 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