

**Safety Data Sheet**

according to UK REACH Regulation

**2-Bromoethyl triflate**

Revision date: 01.06.2022

Product code: 6182

Page 1 of 5

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

2-Bromoethyl triflate

**Further trade names**

Methanesulfonic acid, 1,1,1-trifluoro-, 2-bromoethyl ester; Methanesulfonic acid, trifluoro-, 2-bromoethyl ester

**Synonyms:**

Trifluoromethanesulfonic acid 2-bromoethyl ester

CAS No: 103935-47-3

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**Precursor for [18F]BFE  
(1-Bromo-2-[18F]fluoroethane)**1.3. Details of the supplier of the safety data sheet**

Company name:	ABX advanced biochemical compounds	
	Biomedizinische Forschungsreagenzien GmbH	
Street:	Heinrich-Gläser-Straße 10-14	
Place:	01454 Radeberg	
Telephone:	+49 3528 4041 60	Telefax: +49 3528 4041 65
e-mail:	info@abx.de	
Contact person:	Dr. Christoph Meyer	Telephone: +49 3528 4041 8732
e-mail:	meyer@abx.de	
Internet:	http://www.abx.de	

**1.4. Emergency telephone number:** +49 3528 4041 60**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Acute Tox. 4; H332

Acute Tox. 4; H312

Acute Tox. 4; H302

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Signal word:** Warning**Pictograms:****Hazard statements**

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

**Precautionary statements**

P273 Avoid release to the environment.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**Safety Data Sheet**

according to UK REACH Regulation

**2-Bromoethyl triflate**

Revision date: 01.06.2022

Product code: 6182

Page 2 of 5

P270 Do not eat, drink or smoke when using this product.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**SECTION 3: Composition/information on ingredients****3.1. Substances****Chemical characterization**

Methanesulfonic acid, 1,1,1-trifluoro-, 2-bromoethyl ester; Methanesulfonic acid, trifluoro-, 2-bromoethyl ester

Sum formula: C<sub>3</sub>H<sub>4</sub>BrF<sub>3</sub>O<sub>3</sub>S

Molecular weight: 257.03

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
103935-47-3	2-Bromoethyltriflate			95 - < 100 %
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4; H332 H312 H302			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
103935-47-3		2-Bromoethyltriflate	95 - < 100 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg; oral: ATE = 500 mg/kg		

**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

**After contact with skin**

After contact with skin, wash immediately with: Water. Change contaminated clothing.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**

If swallowed, immediately drink: Water.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**Atomized water. Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam.**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

**SECTION 6: Accidental release measures**

# Safety Data Sheet

according to UK REACH Regulation

## 2-Bromoethyl triflate

Revision date: 01.06.2022

Product code: 6182

Page 3 of 5

### 6.1. Personal precautions, protective equipment and emergency procedures

#### General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

### 6.3. Methods and material for containment and cleaning up

#### Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Keep container in a well-ventilated place.

#### Further information on storage conditions

Storage

of °C: -25

up to °C: -15

Protect against: Light.

Store under (Gas): argon. Nitrogen.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Additional advice on limit values

To date, no national critical limit values exist.

### 8.2. Exposure controls

#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:

liquid

Colour:

colourless

#### Changes in the physical state

Water solubility:

The study does not need to be conducted because the substance is known to be insoluble in water.

**Safety Data Sheet**

according to UK REACH Regulation

**2-Bromoethyl triflate**

Revision date: 01.06.2022

Product code: 6182

Page 4 of 5

**Solubility in other solvents**

Dichloromethane: Chloroform

**SECTION 10: Stability and reactivity****10.6. Hazardous decomposition products**

Carbon dioxide. Carbon monoxide. Bromine hydrogen (HBr). Fluorines-carbon-hydrogens. Sulfur oxides.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Acute toxicity, inhalant.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
103935-47-3	2-Bromoethyltriflate				
	oral	ATE 500 mg/kg			
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 12: Ecological information****12.1. Toxicity**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****List of Wastes Code - residues/unused products**

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

**List of Wastes Code - used product**

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

**List of Wastes Code - contaminated packaging**

## Safety Data Sheet

according to UK REACH Regulation

### 2-Bromoethyl triflate

Revision date: 01.06.2022

Product code: 6182

Page 5 of 5

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Non-contaminated packages may be recycled.

#### SECTION 14: Transport information

**Other applicable information**

Not a hazardous material with respect to transportation regulations.

#### SECTION 15: Regulatory information

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

**National regulatory information**

Water hazard class (D): 3 - highly hazardous to water

#### SECTION 16: Other information

**Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.