

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 02 Jun 2023

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

Bromophos-ethyl

### 1.1. Catalog No.:

683658

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Dermal (Category 4), H312  
Short-term (acute) aquatic hazard (Category 1), H400  
Long-term (chronic) aquatic hazard (Category 1), H410

### 2.2. Label elements

#### 2.2.1. Pictogram



#### 2.2.2.

Labelling according Regulation (EC) No 1272/2008  
Signal word Danger  
Hazard statement(s)

H301 Toxic if swallowed.  
H312 Harmful in contact with skin.  
H410 Very toxic to aquatic life with long lasting effects.  
Precautionary statement(s)  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing.  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
Rinse mouth.  
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water.Call a POISON CENTER/  
doctor if you feel unwell.  
Supplemental Hazard  
Statements  
none  
Reduced Labeling (<= 125 ml)  
Signal word Danger  
Hazard statement(s)  
H301 Toxic if swallowed.  
Precautionary statement(s)  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
Rinse mouth.  
Supplemental Hazard  
Statements  
none  
2.3 Other hazards  
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.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances  
Formula : C<sub>10</sub>H<sub>12</sub>BrCl<sub>2</sub>O<sub>3</sub>PS  
Molecular weight : 394,05 g/mol  
CAS-No. : 4824-78-6  
EC-No. : 225-399-0  
Index-No. : 015-064-00-5

#### 3.1.1. Formula

C<sub>10</sub>H<sub>12</sub>BrCl<sub>2</sub>O<sub>3</sub>PS

#### 3.1.2. Molecular Weight (g/mol)

394.05

### 3.1.3. CAS-No.

4824-78-6

## 4. FIRST AID MEASURES

### 4.1 Description of first-aid measures

#### General advice

Consult a physician. Show this material 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

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. 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

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Sulfur oxides

Oxides of phosphorus

Borane/boron oxides

Combustible.

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

## 6. ACCIDENTAL RELEASE MEASURES

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

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up  
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections  
For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

For precautions see section 2.2.

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

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Storage stability

Recommended storage temperature

2 - 8 °C

Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

### 7.3 Specific end use(s)

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid

Color: colorless

b) Odor No data available

c) Odor 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 > 100,00 °C

h) Evaporation rate No data available

i) Flammability (solid,  
gas)

No data available  
j) Upper/lower  
flammability or  
explosive limits  
No data available  
k) Vapor pressure No data available  
l) Vapor density No data available  
m) Density 1,530 g/cm<sup>3</sup> at 20 °C  
Relative density No data available  
n) Water solubility insoluble  
o) Partition coefficient:  
n-octanol/water  
log Pow: 6,15  
p) Autoignition  
temperature  
No data available  
q) Decomposition  
temperature  
No data available  
r) Viscosity Viscosity, kinematic: No data available  
Viscosity, dynamic: No data available  
s) Explosive properties No data available  
t) Oxidizing properties No data available  
9.2 Other safety information  
No data available

## 10. STABILITY AND REACTIVITY

10.1 Reactivity  
No data available  
10.2 Chemical stability  
Stable under recommended storage conditions.  
10.3 Possibility of hazardous reactions  
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

## 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects  
Acute toxicity  
LD50 Oral - Rat - 52 mg/kg  
Acute toxicity estimate Oral - 100,1 mg/kg  
(Expert judgment)  
Inhalation: No data available  
LD50 Dermal - Rabbit - 500 mg/kg  
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation.  
Behavioral: Convulsions or effect on seizure threshold.  
Lungs, Thorax, or Respiration: Dyspnea.  
Skin corrosion/irritation  
No data available  
Serious eye damage/eye irritation  
No data available  
Respiratory or skin sensitization  
No data available  
Germ cell mutagenicity

No data available  
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

#### 11.2 Additional Information

RTECS: TE7000000

Cholinesterase inhibitors can cause heavy salivation and secretion in the lungs, lachrymation, blurred vision, involuntary defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered heart rate, and/or a fall in blood pressure as a result of their action at cholinergic nerve sites., Highly toxic cholinesterase inhibitor., abdominal cramps, Diarrhea, Tightness of:, Chest, constriction of pupils, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish LC50 - *Rutilus rutilus* - 0,19 mg/l - 96,0 h

### 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 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

Very toxic to aquatic life with long lasting effects.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

#### Contaminated packaging

Dispose of as unused product.

#### 14. TRANSPORT INFORMATION

14.1 UN number  
ADR/RID: 2810 IMDG: 2810 IATA: 2810  
14.2 UN proper shipping name  
ADR/RID: TOXIC LIQUID, ORGANIC, N.O.S. (Bromophos-ethyl)  
IMDG: TOXIC LIQUID, ORGANIC, N.O.S. (Bromophos-ethyl)  
IATA: Toxic liquid, organic, n.o.s. (Bromophos-ethyl)  
14.3 Transport hazard class(es)  
ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1  
14.4 Packaging group  
ADR/RID: III IMDG: III IATA: III  
14.5 Environmental hazards  
ADR/RID: yes IMDG Marine pollutant: yes IATA: no  
14.6 Special precautions for user  
No data available

#### 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.  
National legislation  
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.  
: ENVIRONMENTAL HAZARDS  
15.2 Chemical Safety Assessment  
For this product a chemical safety assessment was not carried out

#### 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be 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. For lab use only!