

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

Product name : (S)-(-)-2-Bromo-3-methylbutyric acid

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Acute toxicity, Inhalation (Category 4)

Acute toxicity, Dermal (Category 4)

Acute toxicity, Oral (Category 4)

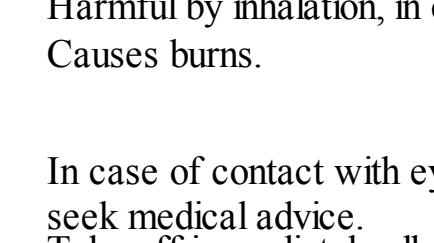
Skin corrosion (Category 1B)

According to European Directive 67/548/EEC as amended.

Harmful by inhalation, in contact with skin and if swallowed. Causes burns.

Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed.

H312

Harmful in contact with skin.

H314

Causes severe skin burns and eye damage.

H332

Harmful if inhaled.

Precautionary statement(s)

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER or doctor/ physician.

Hazard symbol(s)

C

Corrosive

R-phrase(s)

R20/21/22

Harmful by inhalation, in contact with skin and if swallowed.

R34

Causes burns.

S-phrase(s)

S26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S27

Take off immediately all contaminated clothing.

S28

After contact with skin, wash immediately with plenty of water.

S36/37/39

Wear suitable protective clothing, gloves and eye/face protection.

S45

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Other hazards

Lachrymator.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : (S)-2-Bromoisovaleric acid

Formula : C5H9BrO2

Molecular Weight : 181,03 g/mol

CAS-No.	EC-No.	Classification	Concentration
---------	--------	----------------	---------------

(S)-(-)-2-Bromo-3-methylbutyric acid

26782-75-2

Acute Tox. 4; Skin Corr. 1B;
Eye Dam. 1; H302, H312,
H314, H332
C, R20/21/22 - R34

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

4. 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 contaminated clothing and shoes immediately. 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.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

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

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : solid

Colour : white

Safety data

pH : no data available

Melting point : 39 - 44 °C - lit.

Boiling point : 90 - 100 °C at 0,7 hPa - lit.

Flash point : 113 °C - closed cup

Ignition temperature : no data available

Lower explosion limit : no data available

Upper explosion limit : no data available

Water solubility : no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen bromide gas

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germl cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.

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

Potential health effects

Inhalation

Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes, and skin; irritant, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

Ingestion

Harmful if swallowed. Causes burns.

Eye

Causes eye burns.

Signs and Symptoms of Exposure

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes, and skin; irritant, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

skin; irritation, inflammation and edema of the larynx, trachea, bronchi, lungs, and upper respiratory tract.

<p