

## Material Safety Data Sheet

Version 4.0

Revision Date 07/27/2010

Print Date 03/28/2011

---

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : (S)-(-)-3-(Acetylthio)-2-methylpropionic acid

Product Number : 472522

Brand : Aldrich

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +18003255832

Fax : +18003255052

Emergency Phone # : (314) 776-6555

---

**2. HAZARDS IDENTIFICATION****Emergency Overview****OSHA Hazards**

No known OSHA hazards

**GHS Label elements, including precautionary statements**

Pictogram



Signal word Danger

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

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.

**HMIS Classification**

Health hazard: 0

Flammability: 1

Physical hazards: 0

**NFPA Rating**

Health hazard: 0

Fire: 1

Reactivity Hazard: 0

**Potential Health Effects****Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.**Skin** May be harmful if absorbed through skin. May cause skin irritation.**Eyes** May cause eye irritation.**Ingestion** May be harmful if swallowed.

---

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : (S)- $\beta$ -(Acetylmercapto)isobutyric acid  
D-(-)-S-Acetyl- $\beta$ -mercaptoisobutyric acid

Formula : C<sub>6</sub>H<sub>10</sub>O<sub>3</sub>S  
Molecular Weight : 162.21 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>(S)-3-(Acetylthio)-2-methylpropionic acid</b>			
76497-39-7	278-480-8	-	-

---

#### 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. Continue rinsing eyes during transport to hospital.

##### 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 breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

##### Environmental precautions

Do not let product enter drains.

##### 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.

---

#### 7. HANDLING AND STORAGE

##### Precautions for safe handling

Avoid inhalation of vapour or mist.  
Normal measures for preventive fire protection.

##### Conditions for safe storage

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.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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.

#### Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). 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 clear, liquid

Colour light yellow

### Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	> 112.8 °C (> 235.0 °F) - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	1.178 g/cm <sup>3</sup> at 20 °C (68 °F) 1.1827 g/cm <sup>3</sup> at 25 °C (77 °F)
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, Sulphur oxides

---

## 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

### Germ 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, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Reproductive toxicity

no data available

### Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

### Aspiration hazard

no data available

### Potential health effects

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.

### Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

### Additional Information

---

## 12. ECOLOGICAL INFORMATION

### Toxicity

no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

**Mobility in soil**  
no data available

**PBT and vPvB assessment**  
no data available

**Other adverse effects**  
no data available

---

### 13. DISPOSAL CONSIDERATIONS

**Product**  
Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**  
Dispose of as unused product.

---

### 14. TRANSPORT INFORMATION

**DOT (US)**  
UN-Number: 3265 Class: 8 Packing group: II  
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. ((S)-3-(Acetylthio)-2-methylpropionic acid)  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**  
UN-Number: 3265 Class: 8 Packing group: II EMS-No: F-A, S-B  
Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. ((S)-3-(Acetylthio)-2-methylpropionic acid)  
Marine pollutant: No

**IATA**  
UN-Number: 3265 Class: 8 Packing group: II  
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. ((S)-3-(Acetylthio)-2-methylpropionic acid)

---

### 15. REGULATORY INFORMATION

**OSHA Hazards**  
No known OSHA hazards

**DSL Status**  
This product contains the following components that are not on the Canadian DSL nor NDSL lists.  

(S)-3-(Acetylthio)-2-methylpropionic acid	CAS-No. 76497-39-7
---	-----------------------

**SARA 302 Components**  
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**  
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**  
No SARA Hazards

**Massachusetts Right To Know Components**  
No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**  

(S)-3-(Acetylthio)-2-methylpropionic acid	CAS-No. 76497-39-7	Revision Date
---	-----------------------	---------------

**New Jersey Right To Know Components**  

(S)-3-(Acetylthio)-2-methylpropionic acid	CAS-No. 76497-39-7	Revision Date
---	-----------------------	---------------

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

---

**16. OTHER INFORMATION****Further information**

Copyright 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

---