

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : (S)-3-Hydroxybutyric acid

Product Number : 54925  
Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd  
2149 Winston Park Drive  
OAKVILLE ON L6H 6J8  
CANADA

Telephone : +19058299500  
Fax : +19058299292  
Emergency Phone # : 800-424-9300

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : C4H7NaO3  
Molecular Weight : 104.1 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>(S)-3-Hydroxybutyric acid</b>			
6168-83-8	228-209-4	-	-

**3. HAZARDS IDENTIFICATION****WHMS Classification**

D2B Toxic Material Causing Other Toxic Effects Moderate skin irritant  
Moderate respiratory irritant  
Moderate eye irritant

**HMS Classification**

**Health Hazard:** 2  
**Flammability:** 0  
**Physical hazards:** 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

**4. FIRST AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Aldrich - 54925

Sigma-Aldrich Corporation  
www.sigma-aldrich.com

Page 1 of 5

**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. 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**

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

**5. FIRE-FIGHTING MEASURES****Flammable properties**

Flash point no data available  
Ignition temperature no data available

**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 dust. Ensure adequate ventilation.

**Environmental precautions**

Do not let product enter drains.

**Methods for cleaning up**

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

**7. HANDLING AND STORAGE****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.

**Storage**

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

Recommended storage temperature: 2 - 8 °C

hygroscopic Store under inert gas. strongly hygroscopic

**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 dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves.

Aldrich - 54925

Sigma-Aldrich Corporation  
www.sigma-aldrich.com

Page 2 of 5

**Eye protection**

Safety glasses

**Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**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 crystalline  
Colour colourless

**Safety data**

pH no data available  
Melting point 45 - 50 °C (113 - 122 °F)  
Boiling point no data available  
Flash point no data available  
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****Storage stability**

Stable under recommended storage conditions.

**Materials to avoid**

Strong oxidizing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

no data available

**Irritation and corrosion**

no data available

**Sensitisation**

no data available

**Chronic exposure**

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.

Aldrich - 54925

Sigma-Aldrich Corporation  
www.sigma-aldrich.com

Page 3 of 5

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

no data available

**Further information on ecology**

no data available

**13. DISPOSAL CONSIDERATIONS****Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**15. REGULATORY INFORMATION****DSL Status**

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

(S)-3-Hydroxybutyric acid	CAS-No. 6168-83-8
---------------------------	----------------------

**WHMS Classification**

D2B Toxic Material Causing Other Toxic Effects Moderate skin irritant  
Moderate respiratory irritant  
Moderate eye irritant

**16. OTHER INFORMATION**

Aldrich - 54925

Sigma-Aldrich Corporation  
www.sigma-aldrich.com

Page 4 of 5

**Further information**

Copyright 2008 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.

Aldrich - 54925

Sigma-Aldrich Corporation  
www.sigma-aldrich.com

Page 5 of 5