

# Safety Data Sheet

Revision Date Jan-1-2024

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## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifier

Product name: (R)-3-Hydroxybutanoic acid

Catalog No.: S3320

CAS No.: 625-72-9

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, manufacture of substances.

### 1.3 Details of the supplier of the safety data sheet

Company: Selleck Chemicals

TollFree: +1 877 796-6397

Tel: +1 832 582-8158

Fax: +1 832 582-8590

### 1.4 Emergency telephone number

Emergency phone #: +1 832 582-8158

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Acute toxicity, Oral (Category 4), H302

Acute aquatic toxicity (Category 1), H400

**Classification according to EU Directives DSD 67/548/EEC or DPD 1999/45/EC**

Xn, N Harmful, Dangerous for the environment R22, R50/53

### 2.2 GHS Label elements, including precautionary statements

**Labelling according Regulation (EC) No 1272/2008 [CLP]****Pictogram****Signal word**

Warning

**Hazard statement(s)**

H302

Harmful if swallowed.

H400

Very toxic to aquatic life.

**Precautionary statement(s)**

P273

Avoid release to the environment.

**Supplemental hazard statements**

None.

### 2.3 Other hazards

None.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms: Butanoic acid, 3-hydroxy-, (3R)-  
R-3HB, D-3-hydroxybutyric acid

Formula:  $C_4H_8O_3$

Molecular Weight: 104.10

CAS No.: 625-72-9

#### 4. FIRST AID MEASURES

##### 4.1 Description of first aid measures

###### Eye contact

Remove any contact lenses, locate eye-wash station, and flush eyes immediately with large amounts of water. Separate eyelids with fingers to ensure adequate flushing. Promptly call a physician.

###### Skin contact

Rinse skin thoroughly with large amounts of water. Remove contaminated clothing and shoes and call a physician.

###### Inhalation

Immediately relocate self or casualty to fresh air. If breathing is difficult, give cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.

###### Ingestion

Wash out mouth with water; Do NOT induce vomiting; call 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).

##### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

#### 5. FIRE FIGHTING MEASURES

##### 5.1 Extinguishing media

###### Suitable extinguishing media

Use water spray, dry chemical, foam, and carbon dioxide fire extinguisher.

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

During combustion, may emit irritant fumes.

##### 5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective clothing.

#### 6. ACCIDENTAL RELEASE MEASURES

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

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

Refer to protective measures listed in sections 8.

##### 6.2 Environmental precautions

Try to prevent further leakage or spillage. Keep the product away from drains or water courses.

##### 6.3 Methods and materials for containment and cleaning up

Absorb solutions with finely-powdered liquid-binding material (diatomite, universal binders); Decontaminate surfaces and equipment by scrubbing with alcohol; Dispose of contaminated material according to Section 13.

#### 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes and skin. Avoid dust and aerosol formation. Use only in areas with appropriate exhaust ventilation.

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

Keep container tightly sealed in cool, well-ventilated area. Keep away from direct sunlight and sources of ignition.

Store at -20°C

### 7.3 Specific end use(s)

No data available.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

This product contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Engineering controls

Ensure adequate ventilation. Provide accessible safety shower and eye wash station.

#### Personal protective equipment

|                                 |                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Eye protection                  | Safety goggles with side-shields.                                                                                   |
| Hand protection                 | Protective gloves.                                                                                                  |
| Skin and body protection        | Impervious clothing.                                                                                                |
| Respiratory protection          | Suitable respirator.                                                                                                |
| Environmental exposure controls | Keep the product away from drains, water courses or the soil.<br>Clean spillages in a safe way as soon as possible. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|                                              |                   |
|----------------------------------------------|-------------------|
| Appearance                                   | solid             |
| Odor                                         | No data available |
| Odor threshold                               | No data available |
| pH                                           | No data available |
| Melting/freezing point                       | No data available |
| Boiling point/range                          | No data available |
| Flash point                                  | No data available |
| Evaporation rate                             | No data available |
| Flammability (solid, gas)                    | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Vapor pressure                               | No data available |
| Vapor density                                | No data available |
| Relative density                             | No data available |
| Water solubility                             | mg/mL             |
| Partition coefficient                        | No data available |

|                                  |                   |
|----------------------------------|-------------------|
| <b>Auto-ignition temperature</b> | No data available |
| <b>Decomposition temperature</b> | No data available |
| <b>Viscosity</b>                 | No data available |
| <b>Explosive properties</b>      | No data available |
| <b>Oxidizing properties</b>      | 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 acids/alkalis, strong oxidising/reducing agents.

### **10.6 Hazardous decomposition products**

Under fire conditions, may decompose and emit toxic fumes.

Other decomposition products - no data available.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

Classified based on available data. For more details, see section 2.

#### **Skin corrosion/irritation**

Classified based on available data. For more details, see section 2.

#### **Serious eye damage/irritation**

Classified based on available data. For more details, see section 2.

#### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2.

#### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2.

#### **Carcinogenicity**

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

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2.

#### **Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2.

#### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2.

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2.

**Additional information**

RTECS No.: Unavailable

This information is based on our current knowledge. However the chemical, physical, and toxicological properties have not been completely investigated.

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

No data available.

**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**

PBT/vPvB assessment unavailable as chemical safety assessment not required or not conducted.

**12.6 Other adverse effects**

No data available.

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product**

Dispose substance in accordance with prevailing country, federal, state and local regulations.

**Contaminated packaging**

Conduct recycling or disposal in accordance with prevailing country, federal, state and local regulations.

**14. TRANSPORT INFORMATION**

**14.1 UN number**

|              |              |
|--------------|--------------|
| DOT: -       | ADR: 3077.0  |
| IMDG: 3077.0 | IATA: 3077.0 |

**14.2 UN proper shipping name**

|                                                          |
|----------------------------------------------------------|
| DOT: -                                                   |
| ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  |
| IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| IATA: Environmentally hazardous substance, solid, n.o.s. |

**14.3 Transport hazard class(es)**

|           |           |
|-----------|-----------|
| DOT: -    | ADR: 9.0  |
| IMDG: 9.0 | IATA: 9.0 |

**14.4 Packaging group**

|           |           |
|-----------|-----------|
| DOT: -    | ADR: III  |
| IMDG: III | IATA: III |

**14.5 Environmental hazards**

|                            |           |
|----------------------------|-----------|
| DOT: -                     | ADR: yes  |
| IMDG Marine pollutant: yes | IATA: yes |

#### **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**

No data available.

#### **15.2 Chemical safety assessment**

Chemical safety assessment was not carried out for this product.

### **16. OTHER INFORMATION**

The above information is believed to be correct based on our present knowledge but does not purport to be complete. The product is for research use only and for trained personnel. The burden of safe use of this material rests entirely with the user. SELLECK CHEMICALS disclaims all liability for any damage resulting from use of this material.