

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

MSDS Name: (S)-2-Hydroxybutanoic acid n-butyl ester  
Synonyms:  
Company Identification: Annker Organics Co. Ltd.  
Wuhan National Bioindustry Base  
Wuhan 430074, China  
Telephone Number: +86-27-88041443  
Fax Number: +86-27-51829379

### Section 2 - Product Information

Catalog Number: M111030  
CAS Number: 132513-51-0  
MDL Number: MFCD08702976  
EC Number: Not available  
Molecular Formula:  $C_8H_{16}O_3$   
Molecular Weight: 160.21  
Purity: 98%

### Section 3 - Physical and Chemical Properties

Physical state: Liquid  
Color: Colorless to pale yellow  
Odor: Not available  
Freezing/Melting Point: Not available  
Boiling Point: Not available  
Flash Point: Not available  
Refractive Index ( $n_D^{20}$ ): Not available  
Density: Not available  
Decomposition Temperature: Not available  
Solubility: Not available

### Section 4 - Hazards Identification

#### Classification of the substance or mixture

According to Regulation (EC) No1272/2008  
Skin irritation (Category 2)  
Eye irritation (Category 2)  
Specific target organ toxicity - single exposure (Category 3)  
According to European Directive 67/548/EEC as amended.

Irritating to eyes, respiratory system and skin.

### Label elements

Pictogram



Signal word

Warning

### Hazard statement(s)

- |      |                                   |
|------|-----------------------------------|
| H315 | Causes skin irritation.           |
| H319 | Causes serious eye irritation.    |
| H335 | May cause respiratory irritation. |

### Precautionary statement(s)

- |                    |  |
|--------------------|--|
| P261               | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.   |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |

### Hazard symbol(s)

- |    |          |
|----|----------|
| Xi | Irritant |
|----|----------|

### R-phrases(s)

- |           |  |
|-----------|--|
| R36/37/38 | Irritating to eyes, respiratory system and skin. |
|-----------|--|

### S-phrases(s)

- |     |   |
|-----|---|
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| S36 | Wear suitable protective clothing.  |

## Section 5 - First Aid Measures

- Eye:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin:** Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.
- Ingestion:** Get medical aid immediately. Wash mouth out with water.
- Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

## Section 6 - Stability and Reactivity

- |  |   |
|--|---|
| <b>Chemical Stability:</b>               | Stable under normal temperatures and pressures. |
| <b>Materials to avoid:</b>               | Strong oxidizing agents.                        |
| <b>Conditions to Avoid:</b>              | Incompatible materials.                         |
| <b>Hazardous Decomposition Products:</b> | Carbon monoxide, carbon dioxide.                |
| <b>Hazardous Polymerization:</b>         | Will not occur.                                 |

## Section 7 - Handling and Storage

**Handling:** Avoid breathing dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required.

**Storage:** Store in a cool, dry well ventilated place away from sources of heat and incompatible substances. Keep container tightly closed when not in use.

### **Section 8 - Personal Protection**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### **Section 9 - Fire and Explosion Hazard Data**

**General Information:** As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

### **Section 10 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container.

### **Section 11 - Toxicological Information**

**RTECS#:** CAS#132513-51-0: Not available

**LD50/LC50:** RTECS: Not available.

**Carcinogenicity:** (S)-2-Hydroxybutanoic acid n-butyl ester - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

### **Section 12 - Environmental information**

Not available

### **Section 13 - Disposal Consideration**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

### **Section 14 - Transport Information**

**IATA:** This substance is considered to be not restricted for transportation.

**IMO:** This substance is considered to be not restricted for transportation.

**RID/ADR:** This substance is considered to be not restricted for transportation.

## Section 15 - Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### *European/International Regulations*

European Labeling in Accordance with EC Directives

WGK (Water Danger/Protection)

CAS#132513-51-0: 2

Canada

CAS#132513-51-0: Not available

### *US Federal*

#### *TSCA*

CAS#132513-51-0 is not listed on the TSCA Inventory. It is for research and development use only.

## Section 16 - Additional Information

MSDS Creation Date: February 18, 2009

Update: April 1, 2011

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**Note: This product is for laboratory use only - not for drug, household or other use.**