

## SAFETY DATA SHEET

Revision Date 23-Jan-2018

Revision Number 3

### 1. Identification

**Product Name** (S)-2-Hydroxybutyl p-tosylate

**Cat No. :** AC425050000; AC425050010

**Synonyms** No information available

**Recommended Use** Laboratory chemicals.

**Uses advised against** Not for food, drug, pesticide or biocidal product use

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

##### Company

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

##### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                                  |            |
|--------------------------------------------------|------------|
| Flammable liquids                                | Category 4 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

#### Label Elements

##### **Signal Word**

Warning

##### **Hazard Statements**

Combustible liquid  
May cause respiratory irritation



#### **Precautionary Statements**

**Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Wear protective gloves/protective clothing/eye protection/face protection  
Keep cool

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component                     | CAS-No      | Weight % |
|-------------------------------|-------------|----------|
| (S)-2-Hydroxybutyl p-tosylate | 143731-32-2 | > 98     |

### 4. First-aid measures

|                                            |                                                                                                                                 |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.                 |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention. |
| <b>Inhalation</b>                          | Remove from exposure, lie down. Move to fresh air.                                                                              |
| <b>Ingestion</b>                           | Clean mouth with water. Get medical attention.                                                                                  |
| <b>Most important symptoms and effects</b> | Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting                     |
| <b>Notes to Physician</b>                  | Treat symptomatically                                                                                                           |

### 5. Fire-fighting measures

|                                         |                                                                                                                                       |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>     | Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. Cool closed containers exposed to fire with water spray. |
| <b>Unsuitable Extinguishing Media</b>   | No information available                                                                                                              |
| <b>Flash Point</b>                      | 93 °C / 199.4 °F                                                                                                                      |
| <b>Method -</b>                         | No information available                                                                                                              |
| <b>Autoignition Temperature</b>         | No information available                                                                                                              |
| <b>Explosion Limits</b>                 |                                                                                                                                       |
| <b>Upper</b>                            | No data available                                                                                                                     |
| <b>Lower</b>                            | No data available                                                                                                                     |
| <b>Sensitivity to Mechanical Impact</b> | No information available                                                                                                              |
| <b>Sensitivity to Static Discharge</b>  | No information available                                                                                                              |

**Specific Hazards Arising from the Chemical**

Combustible material. Containers may explode when heated.

**Hazardous Combustion Products**

Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>) Sulfur oxides

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

**Health**  
2

**Flammability**  
2

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions**

Do not get in eyes, on skin, or on clothing. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

See Section 12 for additional ecological information.

**Methods for Containment and Clean Up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition.

## 7. Handling and storage

**Handling**

Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition.

**Storage**

Keep in a dry place. Keep container tightly closed. Keep away from heat and sources of ignition. Keep refrigerated. Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies.

**Engineering Measures**

None under normal use conditions. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment****Eye/face Protection**

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 and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

No protective equipment is needed under normal use conditions.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

**Physical State**

Viscous liquid Liquid

**Appearance**

Clear

**Odor**

Odorless

**Odor Threshold**

No information available

**pH**

No information available

**Melting Point/Range**

No data available

|                                        |                                     |
|----------------------------------------|-------------------------------------|
| Boiling Point/Range                    | No information available @ 760 mmHg |
| Flash Point                            | 93 °C / 199.4 °F                    |
| Evaporation Rate                       | No information available            |
| Flammability (solid,gas)               | Not applicable                      |
| Flammability or explosive limits       |                                     |
| Upper                                  | No data available                   |
| Lower                                  | No data available                   |
| Vapor Pressure                         | No information available            |
| Vapor Density                          | No information available            |
| Specific Gravity                       | No information available            |
| Solubility                             | No information available            |
| Partition coefficient; n-octanol/water | No data available                   |
| Autoignition Temperature               | No information available            |
| Decomposition Temperature              | No information available            |
| Viscosity                              | No information available            |
| Molecular Formula                      | C11 H16 O4 S                        |
| Molecular Weight                       | 244.31                              |

## 10. Stability and reactivity

|                                  |                                                                                          |
|----------------------------------|------------------------------------------------------------------------------------------|
| Reactive Hazard                  | None known, based on information available                                               |
| Stability                        | Stable under normal conditions.                                                          |
| Conditions to Avoid              | Incompatible products. Keep away from open flames, hot surfaces and sources of ignition. |
| Incompatible Materials           | Bases, Strong oxidizing agents                                                           |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides                   |
| Hazardous Polymerization         | Hazardous polymerization does not occur.                                                 |
| Hazardous Reactions              | None under normal processing.                                                            |

## 11. Toxicological information

### Acute Toxicity

|                     |                                                                               |
|---------------------|-------------------------------------------------------------------------------|
| Product Information | No acute toxicity information is available for this product                   |
| Oral LD50           | Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg. |
| Dermal LD50         | Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg. |
| Vapor LC50          | Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.    |

|                                      |                          |
|--------------------------------------|--------------------------|
| Component Information                |                          |
| Toxicologically Synergistic Products | No information available |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                 |                                                                                          |
|-----------------|------------------------------------------------------------------------------------------|
| Irritation      | No information available                                                                 |
| Sensitization   | No information available                                                                 |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component                     | CAS-No      | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------------------|-------------|------------|------------|------------|------------|------------|
| (S)-2-Hydroxybutyl p-tosylate | 143731-32-2 | Not listed | Not listed | Not listed | Not listed | Not listed |

|                       |                           |
|-----------------------|---------------------------|
| Mutagenic Effects     | No information available  |
| Reproductive Effects  | No information available. |
| Developmental Effects | No information available. |

|                                            |                                                                                     |
|--------------------------------------------|-------------------------------------------------------------------------------------|
| Teratogenicity                             | No information available.                                                           |
| STOT - single exposure                     | Respiratory system                                                                  |
| STOT - repeated exposure                   | None known                                                                          |
| Aspiration hazard                          | No information available                                                            |
| Symptoms / effects, both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |
| Endocrine Disruptor Information            | No information available                                                            |
| Other Adverse Effects                      | The toxicological properties have not been fully investigated.                      |

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

|                               |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| Persistence and Degradability | Soluble in water Persistence is unlikely based on information available. |
| Bioaccumulation/ Accumulation | No information available.                                                |
| Mobility                      | Will likely be mobile in the environment due to its water solubility.    |

## 13. Disposal considerations

|                        |                                                                                                                                                                                                                                                                 |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste Disposal Methods | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 14. Transport information

|          |               |
|----------|---------------|
| DOT      | Not regulated |
| TDG      | Not regulated |
| IATA     | Not regulated |
| IMDG/IMO | Not regulated |

## 15. Regulatory information

### International Inventories

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

|            |                |
|------------|----------------|
| TSCA 12(b) | Not applicable |
| SARA 313   | Not applicable |

|                                                           |                                                            |
|-----------------------------------------------------------|------------------------------------------------------------|
| <b>SARA 311/312 Hazard Categories</b>                     | See section 2 for more information                         |
| <b>CWA (Clean Water Act)</b>                              | Not applicable                                             |
| <b>Clean Air Act</b>                                      | Not applicable                                             |
| <b>OSHA Occupational Safety and Health Administration</b> | Not applicable                                             |
| <b>CERCLA</b>                                             | Not applicable                                             |
| <b>California Proposition 65</b>                          | This product does not contain any Proposition 65 chemicals |
| <b>U.S. State Right-to-Know Regulations</b>               | Not applicable                                             |
| <b>U.S. Department of Transportation</b>                  |                                                            |
| Reportable Quantity (RQ):                                 | N                                                          |
| DOT Marine Pollutant                                      | N                                                          |
| DOT Severe Marine Pollutant                               | N                                                          |
| <b>U.S. Department of Homeland Security</b>               |                                                            |
| This product does not contain any DHS chemicals.          |                                                            |

**Other International Regulations**

|                       |                          |
|-----------------------|--------------------------|
| <b>Mexico - Grade</b> | No information available |
|-----------------------|--------------------------|

**16. Other information**

|                         |                                                                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Prepared By</b>      | Regulatory Affairs<br>Thermo Fisher Scientific<br>Email: EMSDS.RA@thermofisher.com                                                                                                                                                      |
| <b>Revision Date</b>    | 23-Jan-2018                                                                                                                                                                                                                             |
| <b>Print Date</b>       | 23-Jan-2018                                                                                                                                                                                                                             |
| <b>Revision Summary</b> | This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). |

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**