

## SAFETY DATA SHEET

Revision Date 24-Dec-2021

Revision Number 4

### 1. Identification

**Product Name** Lithium deuteride  
**Cat No. :** AC206210000; AC206210020; AC206210100  
**CAS No** 13587-16-1  
**Synonyms** LiD.  
**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

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

##### Company

Fisher Scientific Company  
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)

Substances/mixtures which, in contact with water, emit flammable gases Category 2

#### Label Elements

**Signal Word**  
Danger

**Hazard Statements**  
In contact with water releases flammable gas

**Precautionary Statements****Prevention**

Keep away from any possible contact with water, because of violent reaction and possible flash fire

Handle under inert gas. Protect from moisture

Wear protective gloves/protective clothing/eye protection/face protection

**Skin**

Brush off loose particles from skin. Immerse in cool water/wrap with wet bandages

**Fire**

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

**Storage**

Store in a dry place. Store in a closed container

**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 % |
|---------------------|------------|----------|
| Lithium (2H)hydride | 13587-16-1 | 99       |

### 4. First-aid measures

|  |  |
|--|--|
| <b>Eye Contact</b>                         | Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention. Take off contaminated clothing and shoes immediately. |
| <b>Inhalation</b>                          | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.                                       |
| <b>Ingestion</b>                           | Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. If possible drink milk afterwards.                                     |
| <b>Most important symptoms and effects</b> | No information available.  |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

### 5. Fire-fighting measures

|                                       |                          |
|---------------------------------------|--------------------------|
| <b>Unsuitable Extinguishing Media</b> | No information available |
| <b>Flash Point</b>                    | No information available |
| <b>Method -</b>                       | No information available |
| <b>Autoignition Temperature</b>       | No information available |

**Explosion Limits**

|   |                          |
|---|--------------------------|
| <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**

Contact with water liberates toxic gas. Water reactive. Produce flammable gases on contact with water.

**Hazardous Combustion Products**

Thermal decomposition can lead to release of irritating gases and vapors. Hydrogen.

**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**  
0

**Flammability**  
2

**Instability**  
1

**Physical hazards**  
W

**6. Accidental release measures**

|                                  |   |
|----------------------------------|---|
| <b>Personal Precautions</b>      | Ensure adequate ventilation. Use personal protective equipment as required. |
| <b>Environmental Precautions</b> | See Section 12 for additional Ecological Information.                       |

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal.

**7. Handling and storage**

|                 |   |
|-----------------|---|
| <b>Handling</b> | Avoid contact with skin and eyes. Avoid contact with skin and clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Avoid breathing vapors or mists. Do not ingest. If swallowed then seek immediate medical assistance. Wash thoroughly after handling. |
| <b>Storage.</b> | Keep from any possible contact with water. Store under an inert atmosphere. Keep away from water or moist air. Incompatible Materials. Strong oxidizing agents.   |

**8. Exposure controls / personal protection**

|                            |   |
|----------------------------|---|
| <b>Exposure Guidelines</b> | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
|----------------------------|---|

|                             |                      |
|-----------------------------|----------------------|
| <b>Engineering Measures</b> | Ventilation systems. |
|-----------------------------|----------------------|

**Personal Protective Equipment**

|                                 |   |
|---------------------------------|---|
| <b>Eye/face Protection</b>      | 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. |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.   |
| <b>Respiratory Protection</b>   | No protective equipment is needed under normal use conditions.  |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.  |

**9. Physical and chemical properties**

|                       |       |
|-----------------------|-------|
| <b>Physical State</b> | Solid |
|-----------------------|-------|

|  |                          |
|--|--------------------------|
| Appearance                             | No information available |
| Odor                                   | No information available |
| Odor Threshold                         | No information available |
| pH                                     | No information available |
| Melting Point/Range                    | 680 °C / 1256 °F         |
| Boiling Point/Range                    | No information available |
| Flash Point                            | No information available |
| Evaporation Rate                       | Not applicable           |
| Flammability (solid,gas)               | No information available |
| Flammability or explosive limits       |                          |
| Upper                                  | No data available        |
| Lower                                  | No data available        |
| Vapor Pressure                         | No information available |
| Vapor Density                          | Not applicable           |
| Specific Gravity                       | 0.820                    |
| Solubility                             | No information available |
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temperature               | No information available |
| Decomposition Temperature              | No information available |
| Viscosity                              | Not applicable           |
| Molecular Formula                      | D Li                     |
| Molecular Weight                       | 8.96                     |

## 10. Stability and reactivity

|                                  |  |
|----------------------------------|--|
| Reactive Hazard                  | Yes  |
| Stability                        | Stable under normal conditions. Hygroscopic.                                       |
| Conditions to Avoid              | Incompatible products.   |
| Incompatible Materials           | Strong oxidizing agents  |
| Hazardous Decomposition Products | Thermal decomposition can lead to release of irritating gases and vapors, Hydrogen |
| 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

**Component Information**  
**Toxicologically Synergistic** 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     |
|---------------------|------------|------------|------------|------------|------------|------------|
| Lithium (2H)hydride | 13587-16-1 | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

|   |  |
|---|--|
| <b>Developmental Effects</b>                      | No information available.                                      |
| <b>Teratogenicity</b>                             | No information available.                                      |
| <b>STOT - single exposure</b>                     | None known   |
| <b>STOT - repeated exposure</b>                   | None known   |
| <b>Aspiration hazard</b>                          | No information available                                       |
| <b>Symptoms / effects, both acute and delayed</b> | No information available                                       |
| <b>Endocrine Disruptor Information</b>            | No information available                                       |
| <b>Other Adverse Effects</b>                      | The toxicological properties have not been fully investigated. |

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

|                                      |                           |
|--------------------------------------|---------------------------|
| <b>Persistence and Degradability</b> | No information available  |
| <b>Bioaccumulation/ Accumulation</b> | No information available. |
| <b>Mobility</b>                      | No information available. |

## 13. Disposal considerations

|                               |   |
|-------------------------------|---|
| <b>Waste Disposal Methods</b> | 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

|                      |        |
|----------------------|--------|
| <b>UN-No</b>         | UN1414 |
| <b>Hazard Class</b>  | 4.3    |
| <b>Packing Group</b> | I      |

### TDG

|                      |        |
|----------------------|--------|
| <b>UN-No</b>         | UN1414 |
| <b>Hazard Class</b>  | 4.3    |
| <b>Packing Group</b> | I      |

### IATA

|                             |                 |
|-----------------------------|-----------------|
| <b>UN-No</b>                | UN1414          |
| <b>Proper Shipping Name</b> | LITHIUM HYDRIDE |
| <b>Hazard Class</b>         | 4.3             |
| <b>Packing Group</b>        | I               |

### IMDG/IMO

|                             |                 |
|-----------------------------|-----------------|
| <b>UN-No</b>                | UN1414          |
| <b>Proper Shipping Name</b> | LITHIUM HYDRIDE |
| <b>Hazard Class</b>         | 4.3             |
| <b>Packing Group</b>        | I               |

## 15. Regulatory information

### United States of America Inventory

| Component           | CAS No     | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|---------------------|------------|------|---|-----------------------------|
| Lithium (2H)hydride | 13587-16-1 | -    | -   | -                           |

**Legend:**

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component           | CAS No     | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|---------------------|------------|-----|------|-----------|-------|------|------|------|-------|------|
| Lithium (2H)hydride | 13587-16-1 | -   | -    | 237-018-5 | -     | -    |      | X    | -     | -    |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations**

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade No information available

**Authorisation/Restrictions according to EU REACH****Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component           | CAS No     | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---------------------|------------|----------------|------------------------------|---------------------------|--|
| Lithium (2H)hydride | 13587-16-1 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component           | CAS No     | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---------------------|------------|---|--|----------------------------|------------------------------------|
| Lithium (2H)hydride | 13587-16-1 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

## 16. Other information

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24-Dec-2021

**Print Date**

24-Dec-2021

**Revision Summary**

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**