

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Lithium Deuteride

**Product Code:** LI-HD-04

**CAS Number:** 13587-16-1

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS 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

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component - Lithium (2H)hydride  
CAS-No - 13587-16-1  
Weight % - 99

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### **SECTION 4. FIRST AID MEASURES**

Eye Contact Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Skin Contact 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.  
Inhalation Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.  
Ingestion Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. If possible drink milk afterwards.  
Most important symptoms and effects  
No information available.  
Notes to Physician Treat symptomatically

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### **SECTION 5. FIREFIGHTING MEASURES**

Unsuitable Extinguishing Media No information available  
Flash Point No information available  
Method - No information available  
Autoignition Temperature No information available  
Explosion Limits  
Upper No data available  
Lower No data available  
Sensitivity to Mechanical Impact No information available  
Sensitivity to Static Discharge 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.  
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

Flammability  
2  
Instability  
1  
Physical hazards  
W

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required.

Environmental Precautions See Section 12 for additional Ecological Information.

Methods for Containment and Clean

Up

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## **SECTION 7. HANDLING AND STORAGE**

Handling 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. Storage Keep from any possible contact with water. Store under an inert atmosphere. Keep away from water or moist air.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

Engineering Measures Ventilation systems.

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.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State 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

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## **SECTION 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  
Hazardous Polymerization Hazardous polymerization does not occur.  
Hazardous Reactions None under normal processing.

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Acute Toxicity  
Product Information No acute toxicity information is available for this product  
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.  
Developmental Effects No information available.  
Teratogenicity No information available.  
STOT - single exposure None known  
STOT - repeated exposure None known  
Aspiration hazard No information available  
Symptoms / effects, both acute and delayed  
No information available  
Endocrine Disruptor Information No information available  
Other Adverse Effects The toxicological properties have not been fully investigated.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity

Do not empty into drains.  
Persistence and Degradability No information available  
Bioaccumulation/ Accumulation No information available.  
Mobility No information available.

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## **SECTION 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.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT  
UN-No UN1414  
Hazard Class 4.3  
Packing Group I  
TDG  
UN-No UN1414  
Hazard Class 4.3  
Packing Group I  
IATA  
UN-No UN1414  
Proper Shipping Name LITHIUM HYDRIDE  
Hazard Class 4.3  
Packing Group I  
IMDG/IMO  
UN-No UN1414  
Proper Shipping Name LITHIUM HYDRIDE  
Hazard Class 4.3  
Packing Group I

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## **SECTION 15. REGULATORY INFORMATION**

United States of America Inventory  
Component Lithium (2H)hydride  
CAS-No 13587-16-1  
TSCA -  
TSCA Inventory notification -Active/Inactive -  
TSCA - EPA Regulatory Flags -  
International Inventories  
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).  
Component Lithium (2H)hydride  
CAS-No 13587-16-1  
DSL -  
NDSL -  
EINECS - 237-018-5  
PICCS -  
ENCS -

AICS - Listed  
IECSC -  
KECL -  
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 chemical.  
Other International Regulations  
Mexico - Grade No information available

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements 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. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.