



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Lithium Aluminum Hydride

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1. Product and Company Identification

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Trade Name: Lithium Aluminum Hydride  
Chemical Formula:  $\text{LiAlH}_4$   
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.  
Street: 37 Ramland Road  
City: Orangeburg  
State: New York  
Zip Code: 10962  
Country: USA  
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)  
+1-703-527-3887 (International)

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2. Hazards Identification

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Signal Word: Danger



Hazard Statements: H260: In contact with water releases flammable gases which may ignite spontaneously  
H314: Causes severe skin burns and eye damage

Precautionary Statements: P231+P232: Handle under inert gas. Protect from moisture  
P262: Do not get in eyes, on skin, or on clothing  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P308: IF exposed or concerned:  
P310: Immediately call a POISON CENTER or doctor/physician  
P378: Use Limestone Powder for extinction

HMIS Health Ratings (0-4):  
Health: 3  
Flammability: 3  
Physical: 3

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### 3. Composition

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Chemical Family: Inorganic Compound  
Additional Names: LAH

Lithium Aluminum Hydride (LiAlH<sub>4</sub>):  
Percentage: 100 wt%  
CAS #: 16853-85-3  
EC #: 240-877-9

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### 4. First Aid Procedures

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General Treatment: Seek medical attention if symptoms persist.  
Special Treatment: None  
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.  
Ingestion: Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.  
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.  
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

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### 5. Firefighting Measures

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Flammability: Flammable  
Extinguishing Media: Do not use water for fires – use Limestone powder.  
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

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### 6. Accidental Release Measures

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If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Use neutralizing agent. Vacuum up neutralized spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.  
Environmental Precautions: Isolate runoff to prevent environmental pollution.

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### 7. Handling and Storage

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Handling Conditions: Handle under dry protective gas. Wash thoroughly after handling.  
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.  
Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.  
Ventilation: Ensure good ventilation to maintain concentration at or below threshold limit.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	N/A
Threshold Limit Value:	1 mg/m <sup>3</sup> as Al, long-term value
Special Equipment:	Full face protection.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves (0.11 mm thickness)
Eye Protection:	Tightly sealed goggles. Full face protection.
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	White to grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	>125 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	0.917 g/cc
Molecular weight:	37.92 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Strong oxidizing agents, water, air, bases, halogens, halocarbons, alcohols, reducing agents, water/moisture
Incompatible Conditions:	Water/moisture, air
Hazardous Decomposition Products:	Lithium oxide, Aluminum oxide, Metal oxide fume

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	Causes serious eye damage
Skin:	Causes severe skin burns
Ingestion:	Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	85 mg/kg for mouse by mouth
Carcinogen:	N/A

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## 12. Ecological Information

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Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	Do not allow undiluted product or large quantities to reach ground water, water course, or sewage system. Avoid transfer into the environment.

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### 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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### 14. Transportation Data

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Hazardous: Hazardous for transportation



Hazard Class: 4.3 Substances which, in contact with water, emit flammable gases  
Packing Group: PG I  
UN Number: UN1410  
Proper Shipping Name: Lithium aluminum hydride

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### 15. Regulatory Information

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Sec 302 Extremely Hazardous: N/A  
Sec 304 Reportable Quantities: N/A  
Sec 313 Toxic Chemicals: N/A

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### 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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