



LTS Research Laboratories, Inc.
Safety Data Sheet
Lithium Hydride

1. Product and Company Identification

Trade Name: Lithium Hydride
Chemical Formula: LiH
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)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H260: In contact with water releases flammable gases which may ignite spontaneously.
H301: Toxic if swallowed.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage

Precautionary Statements: P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231+P232: Handle under inert gas. Protect from moisture.
P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340+P310: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P363: Wash contaminated clothing before reuse.

P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P402+P404: Store in a dry place. Store in a closed container.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

HMIS Health Ratings (0-4):

Health:	3
Flammability:	4
Physical:	2

3. Composition

Chemical Family:	Metal hydride
Additional Names:	Lithium Hydride

Lithium Hydride (LiH):	
Percentage:	100 wt%
CAS #:	7580-67-8
EC #:	231-484-3

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling and damage to the delicate tissue and danger of perforation.

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

5. Firefighting Measures

Flammability:	Non-flammable, except as powder
Extinguishing Media:	Carbon dioxide (CO ₂), dry chemical, dry sand, alcohol resistant foam
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.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up 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.

7. Handling and Storage

Handling Conditions:	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. Keep away from water. Store under an inert atmosphere.
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:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	0.025 mg/m ³ as LiH, long-term value
Threshold Limit Value:	0.05 mg/m ³ as LiH, long-term value
Special Equipment:	None
Respiratory Protection:	Use a recommended dust respirator or mask. Only use equipment. tested and approved under appropriate government standards
Protective Gloves:	Rubber gloves.
Eye Protection:	Safety glasses or goggles.
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Light Grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	680 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	0.825 g/cc
Molecular weight:	7.95 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Acids, strong oxidizing agents, alcohols, chlorine, oxygen
Incompatible Conditions:	excessive heat, moisture
Hazardous Decomposition Products:	Metal oxide fume, hydrogen

11. Toxicological Information

Potential Health Effects:

Eyes:	Causes severe damage
Skin:	Causes severe burns
Ingestion:	Causes possible perforation
Inhalation:	May cause irritation
Chronic:	N/A

Signs & Symptoms:

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the tissue and danger of perforation.

Aggravated Medical Conditions:

N/A

Median Lethal Dose:

77.5 mg/kg for rat by mouth

Carcinogen:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by OSHA.

12. Ecological Information

Aquatic Toxicity:	LC50: 62.22 mg/L/96h (Danio rerio)
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	N/A

13. Disposal Considerations

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

14. Transportation Data

Hazardous: Hazardous for transportation



Hazard Class:	4.3: Dangerous when wet materials
Packing Group:	I
UN Number:	UN1414
Proper Shipping Name:	Lithium hydride

15. Regulatory Information

Sec 302 Extremely Hazardous:	Yes
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

16. Other Information

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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