



LTS Research Laboratories, Inc.
Safety Data Sheet
Lithium Metal

1. Product and Company Identification

Trade Name: Lithium Metal
Chemical Formula: Li
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 2001 Oaks Pkwy
City: Belmont
State: North Carolina
Zip Code: 28012
Country: USA
Tel #: +1 (704) 899 2840

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.
H314: Causes severe skin burns and 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/ vapors/ spray.
P264: Wash face, hands, and any exposed skin thoroughly after handling.
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 contaminated clothing. Rinse skin with water/ shower.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
P310: 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 suitable extinguishing media 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:	3
Physical:	2

3. Composition

Chemical Family:	Alkali Metal
Additional Names:	None

Lithium metal (Li):	
Percentage:	100 wt%
CAS #:	7439-93-2
EC #:	231-102-5

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	Treat symptomatically.
Important Symptoms:	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contradicted. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe 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 and induce vomiting. 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:	Highly flammable Contact with water releases flammable gases
Extinguishing Media:	Do not use water or carbon dioxide. Use dry sand, dry ground dolomite, dry clay, dry powder, or approved class D extinguishers.
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:	Ensure adequate ventilation. Wear personal protective equipment/ face protection. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Handle product only in closed system or provide appropriate exhaust ventilation.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store contents under argon. Keep from any possible contact with water. 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. Remove and wash contaminated clothing and gloves, including the inside, before re-use.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber gloves, 0.11 mm thick
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	Silver
Form:	Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	1342 °C
Melting Point:	180 °C
Flash Point:	N/A
Autoignition Temperature:	180 °C
Density:	0.534 g/cc
Molecular weight:	6.941 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Acids, Carbon dioxide, Halogens, Metals, Nitriles, Organic materials, Oxygen, Phosphorus, Sulfur compounds, Water.
Incompatible Conditions:	Exposure to moist air or water. Exposure to air.
Hazardous Decomposition Products:	Lithium oxide
Note:	In contact with water releases flammable gases which may ignite spontaneously.

11. Toxicological Information

Potential Health Effects:

Eyes:	Causes serious eye damage
Skin:	Causes severe skin burns
Ingestion:	Strong corrosive effect on mouth and throat 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: N/A

Carcinogen:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible 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 a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

12. Ecological Information

Aquatic Toxicity: N/A

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

Packing Group: I

UN Number: UN1415

Proper Shipping Name: Lithium

Notes: There are special transportation regulations regarding this material. Requires cargo aircraft label when shipping.

15. Regulatory Information

Sec 302 Extremely Hazardous: No

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.

Document Last Revised:

02/04/2026

