



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Lithium metal

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1. Product and Company Identification

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Trade Name: Lithium metal  
Chemical Formula: Li  
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: 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 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 all 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. Continue rinsing  
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

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### 3. Composition

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Chemical Family:	Alkali Metal
Additional Names:	None

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

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### 4. First Aid Procedures

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General Treatment:	Immediately call a POISON CENTER or doctor/physician.
Special Treatment:	None
Important Symptoms:	Causes severe skin burns and eye damage.

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:	Highly flammable Contact with water releases flammable gas
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.

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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. 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.

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## 7. Handling and Storage

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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.
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. Do not store near acids.
Ventilation:	Provide sufficient 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:	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, NBR 0.11mm thick.
Penetration time of glove material:	480 minutes
Eye Protection:	Safety glasses or 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	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

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## 10. Reactivity

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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.

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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:	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: 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: N/A

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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 Dangerous when wet materials

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.

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## 15. Regulatory Information

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Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: No

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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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