


<a href="#">Lithium Particles</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Balls</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Band</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Bars</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Blocks</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Chunk</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Coil</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Concentrate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Cylinder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Disc</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Flake</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Flange</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Foil</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Granules</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Ingot</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Lump</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Metal</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Microfoil</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Microleaf</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Nanoparticle Dispersion</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Nanoparticles</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Nanoprisms</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Parts</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Pellets</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Pieces</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Plate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Powder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Puck</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Ribbon</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Ring</a>	<a href="#">Pricing &gt;</a>

<a href="#">Lithium Rod</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Rotatable Sputtering Target</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Samples</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Shavings</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Sheet</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Shot</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Single Crystal</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Sleeve</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Slugs</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Specimen</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Spheres</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Spring</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Sputtering Target</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Sticks</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Strip</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Tape</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Tube</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Wafer</a>	<a href="#">Pricing &gt;</a>
<a href="#">Lithium Wire</a>	<a href="#">Pricing &gt;</a>
<a href="#">Ultra Thin Lithium Nanoscale Foil</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	Li
<b>Pubchem CID</b>	3028194
<b>MDL Number</b>	MFCD00134051
<b>EC No.</b>	231-102-5
<b>Beilstein/Reaxys No.</b>	N/A
<b>SMILES</b>	[Li]
<b>Inchi Identifier</b>	InChI=1S/Li
<b>Inchi Key</b>	WHXSMMKQMYFTQS-UHFFFAOYSA-N
<b>Signal Word</b>	Danger
<b>Hazard Statements</b>	H260-H314
<b>Hazard Codes</b>	F,C
<b>Precautionary Statements</b>	P231+P232-P260-P303+P361+P353-P305+P351+P338-P501
<b>Flash Point</b>	Not applicable
<b>Risk Codes</b>	14/15-34
<b>Safety Statements</b>	8-43-45
<b>RTECS Number</b>	OJ5540000

Transport Information	UN 1415 4.3/PG 1
WGK Germany	2
GHS Pictograms	<a href="#">GHS05 Corrosive</a>  <a href="#">GHS02 Flame</a> 

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## SAFETY DATA SHEET

Date Accessed: 04/19/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #7439-93-2

**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:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
GHS02 Flame  
Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.  
GHS05 Corrosion  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Classification according to Directive 67/548/EEC or Directive 1999/45/EC  
C; Corrosive  
R34: Causes burns.  
F; Highly flammable  
R14/15: Reacts violently with water, liberating extremely flammable gases.

Information concerning particular hazards for human and environment:

N/A

Hazards not otherwise classified

No data available

Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS02

GHS05

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.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

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.

P405 Store locked up.

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

WHMIS classification

B6 - Reactive flammable material

D2B - Toxic material causing other toxic effects

E - Corrosive material

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

3

3

3

Health (acute effects) = 3

Flammability = 3

Physical Hazard = 3

Other hazards

Results of PBT and vPvB assessment

PBT:  
N/A  
vPvB:  
N/A

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

Substances  
CAS No. / Substance Name:  
7439-93-2 Lithium  
Identification number(s):  
EC number:  
231-102-5  
Index number:  
003-001-00-4

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

Description of first aid measures  
General information  
Immediately remove any clothing soiled by the product.  
If inhaled:  
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
In case of skin contact:  
Immediately wash with soap and water; rinse thoroughly.  
Seek immediate medical advice.  
In case of eye contact:  
Rinse opened eye for several minutes under running water. Consult a physician.  
If swallowed:  
Seek medical treatment.  
Information for doctor  
Most important symptoms and effects, both acute and delayed  
Causes severe skin burns.  
Causes serious eye damage.  
Indication of any immediate medical attention and special treatment needed  
No data available

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

Extinguishing media  
Suitable extinguishing agents  
Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents  
Water  
Special hazards arising from the substance or mixture  
Reacts violently with water  
If this product is involved in a fire, the following can be released:  
Lithium oxide  
Advice for firefighters  
Protective equipment:  
Wear self-contained respirator.  
Wear fully protective impervious suit.

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

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources  
Environmental precautions:  
Do not allow product to enter drains, sewage systems, or other water courses.  
Do not allow material to penetrate the ground or soil.  
Methods and materials for containment and cleanup:  
Use neutralizing agent.  
Dispose of contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents  
Prevention of secondary hazards:  
Keep away from ignition sources.  
Reference to other sections  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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

Handling  
Precautions for safe handling  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.  
Information about protection against explosions and fires:  
No data available  
Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

Further information about storage conditions:

Protect from humidity and water.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Specific end use(s)

No data available

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

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

None.

Additional information:

No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) 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.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.

Material of gloves

Nitrile rubber, NBR

Penetration time of glove material (in minutes)

480

Glove thickness

0.11 mm

Eye protection:

Tightly sealed goggles

Full face protection

Body protection:

Protective work clothing.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Solid in various forms

Color: Grey

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 180.5 °C (357 °F)

Boiling point/Boiling range: 1342 °C (2448 °F)

Sublimation temperature / start: No data available

Flammability (solid, gas)

Contact with water liberates extremely flammable gases.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure at 20 °C (68 °F): 0 hPa

Density at 20 °C (68 °F): 0.53 g/cm<sup>3</sup> (4.423 lbs/gal)

Relative density

No data available.

Vapor density

N/A

Evaporation rate

N/A

Solubility in Water (H<sub>2</sub>O): Reacts violently

Contact with water releases flammable gases

Partition coefficient (n-octanol/water): No data available.

Viscosity:

Dynamic: N/A

Kinematic: N/A



Other information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

### Reactivity

Reacts violently with water.

In contact with water releases flammable gases which may ignite spontaneously.

### Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

### Possibility of hazardous reactions

Reacts with strong oxidizing agents

Contact with water releases flammable gases

Reacts violently with water

### Conditions to avoid

No data available

### Incompatible materials:

Acids

Oxidizing agents

Water/moisture

### Hazardous decomposition products:

Lithium oxide

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

### Information on toxicological effects

#### Acute toxicity:

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

#### LD/LC50 values that are relevant for classification:

No data

#### Skin irritation or corrosion:

Causes severe skin burns.

#### Eye irritation or corrosion:

Causes serious eye damage.

#### Sensitization:

No sensitizing effects known.

#### Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

#### Carcinogenicity:

No classification data on carcinogenic properties of

this material is available from the EPA, IARC, NTP, OSHA or ACGIH.  
Reproductive toxicity:  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.  
Specific target organ system toxicity - repeated exposure:  
No effects known.  
Specific target organ system toxicity - single exposure:  
No effects known.  
Aspiration hazard:  
No effects known.  
Subacute to chronic toxicity:  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.  
Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
Carcinogenic categories  
OSHA-Ca (Occupational Safety & Health Administration)  
Substance is not listed

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
Aquatic toxicity:  
No data available  
Persistence and degradability  
No data available  
Bioaccumulative potential  
No data available  
Mobility in soil  
No data available  
Additional ecological information:  
Avoid transfer into the environment.  
Results of PBT and vPvB assessment  
PBT:  
N/A  
vPvB:  
N/A  
Other adverse effects  
No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation  
Consult official regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation:  
Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA  
UN1415  
UN proper shipping name  
DOT  
Lithium  
IMDG, IATA  
LITHIUM  
Transport hazard class(es)  
DOT  
Class  
4.3 Substances which, in contact with water, emit flammable gases.  
Label  
4.3  
Class  
4.3 (W2) Substances which, in contact with water, emit flammable gases  
Label  
4.3  
IMDG, IATA  
Class  
4.3 Substances which, in contact with water, emit flammable gases.  
Label  
4.3  
Packing group  
DOT, IMDG, IATA  
I  
Environmental hazards:  
N/A  
Special precautions for user  
Warning: Substances which, in contact with water, emit flammable gases  
EMS Number: F-G,S-N  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT):  
No  
UN "Model Regulation":  
UN1415, Lithium, 4.3, I

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings) Substance is not listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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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.

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