

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: Lithium Silicon Alloy

Product Code: LI-SI-01-P

CAS Number: 68848-64-6

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
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SECTION 2. HAZARDS IDENTIFICATION

Signal Word: Danger



Hazard Statements:

H260: In contact with water releases flammable gases which may ignite spontaneously

H228: Flammable solid

H314: Causes severe skin burns and eye damage

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking

P231+P232: Handle under inert gas. Protect from moisture

P240: Ground/bond container and receiving equipment

P241: Use explosion-proof electrical/ventilating/light/equipment

P260: Do not breathe dust/fume/gas/mist/vapours/spray

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

P370+P378: In case of fire: Use CO₂, sand, extinguishing powder for extinction

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: 3

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Lithium (Li):

CAS #: 7439-93-2

Silicon (Si):

CAS #: 7440-21-3

SECTION 4. FIRST AID MEASURES

General Treatment:

Seek medical attention if symptoms persist.

Special Treatment:

None

Important Symptoms:

Causes severe skin burns

Causes severe 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:

Immediately remove any clothing soiled by the product. 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.

SECTION 5. FIREFIGHTING MEASURES

Flammability:

Flammable

Extinguishing Media:

Do not use water for metal fires – use CO₂, sand, extinguishing 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.

SECTION 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.

SECTION 7. HANDLING AND STORAGE

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 under dry inert gas. 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:

Provide sufficient ventilation to maintain concentration at or below threshold limit.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible Exposure Limits: 15 mg/m³ as Si total dust, long-term value 5 mg/m³ as Si respirable fraction, long-term value

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Color N/A

Form: Powder, Granules, Pellets, Sputtering target, Custom parts

Odor: N/A

Water Solubility: Reacts violently releasing flammable gases

Boiling Point: N/A

Melting Point: 180.5-1414 °C

Flash Point: N/A

Autoignition Temperature: N/A

Density: N/A

Molecular weight: N/A

SECTION 10. STABILITY AND REACTIVITY

Stability:

Stable under recommended storage conditions

Reacts With:

Water, Acids, Oxidizing agents, Halogens, Interhalogens

Incompatible Conditions:

Water/moisture

Hazardous Decomposition Products:

Lithium oxide, Silicon oxide

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: May cause irritation

Skin: May cause irritation

Ingestion: May cause irritation

Inhalation: May cause irritation

Chronic: N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: 3160 mg/kg for rat by mouth

Carcinogen: N/A

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Low

Persistent Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes: N/A

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

Hazardous: Hazardous for transportation.

Hazard Class: 4.3 Substances which, in contact with water, emit flammable gases

Packing Group: I

UN Number: UN1417

Proper Shipping Name: Lithium Silicon

SECTION 15. REGULATORY INFORMATION

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

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.