

1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Lithium Sulfide

Chemical Formula: Li_2S

Manufacturer Item Number: LI-2920

REACH No. A registration number is not available for this substance as the substance or its uses are exempt from registration, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

Identification No. 235-228-1 (EC number)

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2. HAZARD IDENTIFICATION

Classification according to Regulation (EC) No. 1272/2008

Acute toxicity, oral (Category 3), H302
Skin corrosion/irritation (Category 1B), H315
Serious eye damage/eye irritation (Category 1), H319

Labelling according to Regulation (EC) No. 1272/2008

Signal Word: Danger

Pictograms:



Hazard Statements: H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Precautionary Statements:

Prevention

P260 Avoid breathing dust / fumes / gas / vapors / spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / protective clothing / eye protection / face protection.

Response

- P301+310 IF SWALLOWED: Immediately call a POISON CENTER or physician.
 P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
 P304+340 IN INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+351+338 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 physician.
 P330 Rinse mouth.
 P363 Wash contaminated clothing before reuse.

Storage

- P405 Store locked up.

Disposal

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

Supplemental Hazard Information

EUH029 Contact with water liberates toxic gas.

Other Hazards

This substance / mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION

Additional Names:	Lithium Sulphide		
Formula	Li ₂ S		
Percentage:	Component	Classification	Concentration
	Lithium Sulfide	Acute Tox. (Oral) 3; H301, Skin Corr. 1B; H314, Eye Dam. 1; H318	<= 100%
CAS #:	12136-58-2		
EC #:	235-228-1		

4. FIRST AID PROCEDURES

General Treatment	Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area. Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes:	Rinse thoroughly with plenty of water for at least 15 minute. Remove contact lenses if present and easy to do. Continue rinsing.

5. FIREFIGHTING MEASURES

- Special Hazards from Substance:** Sulphur Oxides, Lithium Oxides
- Extinguishing Media:** Do NOT use water — use CO₂, sand, or extinguishing powder.
- Special Fire Fighting Procedures:** 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:** Use appropriate personal protective equipment. Avoid dust formation. Avoid breathing dust, vapour, mist, or gas. Isolate spill area and provide ventilation. Evacuate personnel to safe areas. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal.
- Environmental Precautions:** Isolate runoff to prevent environmental pollution.

7. HANDLING AND STORAGE

- Handling Conditions:** Handle under dry inert gas. Keep container tightly sealed. Wash thoroughly after handling. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
- Storage Conditions:** Store in a cool dry place in a tightly sealed container. Never allow product to get in contact with water during storage. Store under inert gas. Stench. Hygroscopic.
- 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 appropriate exhaust ventilation at places where dust is formed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits:	Authority	Basis	Limit	Remarks
	-	-	-	Contains no substances with occupational exposure limits.
Threshold Limit Value:	Authority	Basis	Limit	Remarks
	-	-	-	Contains no substances with occupational exposure limits.
Special Equipment:	Engineer environmental controls to ensure adequate ventilation and avoid material coming into contact with moisture in the air. Handle under dry inert gas.			
Respiratory Protection:	Where risk assessment shows air-purify respirators are appropriate use a full-face particle respirator type P100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).			
Protective Gloves:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.			
Eye Protection:	Safety glasses or goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).			
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves / pants.			

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Color:	White	Molecular Weight:	45.95 g/mol
Forms:	Granules, Powder	Density:	1.66 g/cm ³ at 20°C (68°F)
Odor:	Stench	pH:	No Data Available.
Water Solubility:	Decomposes in water	Auto-Ignition Temperature:	No Data Available.
Boiling Point:	> 1,372°C (> 2,502°F)	Evaporation Rate:	No Data Available.
Melting Point / Freezing Point:	> 938°C (> 1,720°F)	Flammability or Explosive Limits:	No Data Available.
Vapor Pressure:	No Data Available.	Partition Coefficient: n-octanol/ water	No Data Available.
Vapor Density:	No Data Available.	Decomposition Temperature:	No Data Available.
Flash Point:	No Data Available.	Viscosity:	No Data Available.

10. REACTIVITY

Stability:	Stable under recommended storage conditions.
Reacts with:	Reacts violently with water. Contact with acids releases toxic gas.
Incompatible Conditions:	Moisture / water, strong oxidizing agents, acids
Hazardous Decomposition Products:	Hazardous decomposition products formed under fire conditions includes Lithium Oxide, Hydrogen Sulfide, or Sulfur Oxide(s) fumes

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	Eyes: May cause serious irritation.
	Skin: May cause irritation.
	Ingestion: May cause irritation. Cough and shortness of breath.
	Inhalation: May cause irritation. Cough and shortness of breath.
Chronic Toxicity	Skin Corrosion / Irritation: May cause serious damage to tissue of the mucous membranes and skin.
	Serious Eye Damage / Irritation: May cause serious damage to tissue of the eyes.
	Respiratory / Skin Sensitization: May cause serious damage to tissue of the upper respiratory tract.
	Mutagenic Effects: No Data Available.
	Reproductive / Teratogenic Effects: No Data Available.
	Specific Target Organ Toxicity: Large doses of lithium ion have caused dizziness and prostration, and can cause kidney damage if sodium intake is limited. Dehydration, weight loss, dermatological effects, and thyroid disturbances have been reported. Central nervous system effects that include slurred speech, blurred vision, sensory loss, ataxia, and convulsions may occur.

Specific Target Organ Toxicity: Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to lithium ion.
(repeated exposure)

Aspiration Hazard: No Data Available.

Other Adverse Effects: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Carcinogenicity:

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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 identified as a carcinogen or potential carcinogen by OSHA.

Additional Information RTECS: OJ6439500

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Low

Persistence and degradability: No Data Available.

Bioaccumulative potential: No Data Available.

Results of PBT and vPvB assessment: This substance / mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Notes: Do not allow material to be released into the environment without proper government permits. Do not allow undiluted product or large quantities to reach ground water, water course, or sewage system.

13. DISPOSAL CONSIDERATIONS

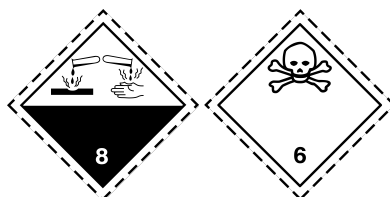
Disposal: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Empty containers should be taken to an appropriate waste handling site for recycling or disposal. Dispose of in accordance with local, state, or national regulations.

EU Waste Code: The waste code should be assigned in discussion between the user, the producer, and the waste disposal company.

14. TRANSPORTATION DATA

Hazardous: ADR/RID: Hazardous for Transportation
IMDG: Hazardous for Transportation
IATA: Hazardous for Transportation

Pictogram:



Hazard Class: 8 (6.1)

Packing Group: II

UN Number: UN 2923
ADR/RID **Proper Name:** CORROSIVE SOLID, TOXIC, N.O.S. (Lithium Sulfide)
 Environmental Hazard: No
IMDG **Proper Name:** CORROSIVE SOLID, TOXIC, N.O.S. (Lithium Sulfide)
 EMS-No: F-A, S-B
 Marine Pollutant: No
IATA **Proper Name:** CORROSIVE SOLID, TOXIC, N.O.S. (Lithium Sulfide)

15. REGULATORY INFORMATION

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

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended	Not Listed.
Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I, as amended	Not Listed.
Regulation (EC) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1, as amended	Not Listed.
Regulation (EC) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2, as amended	Not Listed.
Regulation (EC) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3, as amended	Not Listed.
Regulation (EC) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V, as amended	Not Listed.
Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended	Not Listed.

2. Authorisations

Regulation (EC) No. 1907/2006 REACH Annex XIV Substances subject to authorisation, as amended	Not Listed.
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3. Restrictions on use

Regulation (EC) No. 1907/2006 REACH Annex XVII Substances to restrict on marketing and use, as amended	Not Listed.
Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended	Not Listed.

4. Other EU Regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended	Not Listed
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5. Other Regulations

Regulation (EC) No. 1907/2006	This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
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Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. OTHER INFORMATION

Copyright 2020 Lorad Chemical Corporation. 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 does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation. The information in this sheet does not represent a guarantee of the properties of the product. Lorad Chemical Corporation and its Affiliates make no warranty with respect to the accuracy of the information or the suitability of this product for any particular application, and shall not be held liable for any damage resulting from handling or from contact with the above product.

Revision Date: 04/27/2020