1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Lithium Sulfide

Chemical Formula: Li₂S

Manufacturer Item Number: LI-2920

Manufacturer: Lorad Chemical Corporation
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Saint Petersburg, Florida, 33713
United States of America

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Emergency Contact: (800) 255–3924 (US & Canada)
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2. HAZARD IDENTIFICATION

Signal Word: Danger

Pictograms:

Hazard Statements: H261 In contact with water, releases flammable gas.
H302 Toxic if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary Statements: P210 Keep away from heat/sparks/flame. No smoking.
P260 Do not breathe dust or mist.
P231+P232 Handle under inert gas.
P261 Avoid breathing dust / fumes / vapor.
P264 Wash skin thoroughly after handling.
P301+310+330+331 IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (or hair): Remove take off immediately all contaminated clothing. Rinse skin with water / shower.
P304+340+310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.
P305+351+338+310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
P305+P351 If in eyes: Rinse cautiously with water for several minutes.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents / container to an approved waste disposal plant.

HMIS Health Ratings (0-4)
- Health: 2
- Flammability: 2
- Physical: 2
### 3. COMPOSITION

- **Additional Names:** Lithium Sulphide
- **Percentage:** 100 wt%
- **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:** Give one or two glasses of water and 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:** Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

### 5. FIREFIGHTING MEASURES

**Flammability:** Flammable

**Special Hazards from Substance:** Reacts violently with water.

**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, vapors, 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.

**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.

**Ventilation:** Provide appropriate exhaust ventilation at places where dust is formed.
8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits:

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<th>Basis</th>
<th>Limit</th>
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Threshold Limit Value:

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<td>-</td>
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</tbody>
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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 N100 (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 supplier 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/cm³ at 20°C (68°F)

Odor: Rotten Eggs
pH: No Data Available.

Water Solubility: High, violent reaction
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, Light

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:** Lithium and its compounds are possible teratogenic by analogy to lithium carbonate which has equivocal human teratogenic data and positive animal teratogenic data.
- **Specific Target Organ Toxicity:**
  - (single exposure) 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.
  - (repeated exposure) Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to lithium ion.
- **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.

12. ECOLOGICAL INFORMATION

**Aquatic Toxicity:** Low

**Persistence and degradability:** No Data Available.

**Bioaccumulative potential:** No Data Available.

**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.
14. TRANSPORTATION DATA

Hazardous: Hazardous for Transportation
DoT: Hazardous for Transportation
IMDG: Hazardous for Transportation
IATA: Hazardous for Transportation

Pictogram:

Hazard Class: 4.3 Substances which in contact with water release flammable gases
Packing Group: II
UN Number: UN2813

US DoT
Proper Name: Water-reactive solid, n.o.s. (Lithium Sulfide)
Marine Pollutant: No

IMDG
Proper Name: WATER-REACTIVE SOLID, N.O.S. (Lithium Sulfide)
EMS-No: F-G, S-N

IATA
Proper Name: WATER-REACTIVE SOLID, N.O.S. (Lithium Sulfide)

15. REGULATORY INFORMATION

SARA 302 Components
No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right to Know Components
No components are subject to Ma. Right to Know Act.

Pennsylvania Right to Know Components

New Jersey Right to Know Components

California Prop. 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Copyright 2018 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: 07/26/2018