Safety Data Sheet

1. Product and Company Identification

Product Name: Lithium Sulfide
Chemical Formula: Li_2S
CAS#: 12136-58-2

Identified uses: Laboratory chemicals, Synthesis of substances

Contact Information:
MTI Corporation
860 South 19th Street
Richmond, CA 94804, USA
Tel: 510-525-3070
Fax: 510-525-4705
Email: info@mtixtl.com
Website: www.mtixtl.com

Non-emergency assistance: 1-888-525-3070

Emergency assistance:
Company: CHEMTEL (MTI Contract# MIS2559467) Day or Night
Tel (Within USA and Canada): 1-800-255-3924
Tel (Outside USA and Canada): 1-813-248-0585

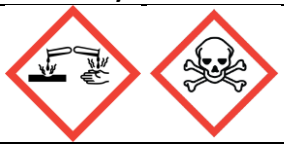
2. Hazards Identification

For the full text of the H-Statements mentioned in this Section, see Section 16.

HMIS Rating

Health hazard:	3
Flammability:	0
Physical Hazard:	0

GHS Label elements, including precautionary statements

Pictogram	
Signal	Danger
Hazard statement(s)	
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
Precautionary statement(s)	
P260	Do not breath dust/fumes/gas/mist/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 place.
P280	Wear protective/gloves/protective clothing/eye protection/face protection.
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.
P405	Store locked up.
P501	Dispose of contents / container in accordance with local / regional / national / international regulations.

3. Composition/Information on Ingredients

Substance Name

Formula	Li_2S
Molecular weight	45.95 g/mol
CAS-No.	12136-58-2
EC-No.	265-228-1

Hazardous Components

Aluminum	Acute Tox. (Oral) 3; H301, Skin Corr. 1B; H314, Eye Dam. 1; H318

4. First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Seek medical attention is symptoms persist.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

In case of eye contact

Rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Do NOT use water — use CO_2, sand, or extinguishing powder.

5.2 Special hazards arising from the substance mixture

Sulphur Oxides, Lithium Oxides

5.3 Advice for firefighters

Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See Section 10 for decomposition products.

5.4 Further Information

No data available

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Use appropriate personal protective equipment. Avoid dust formation. Avoid breathing dust, vapor, 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.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and Storage

7.1 Precautions for safe handling

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.

7.2 Conditions for safe storage, including any incompatibilities

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.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure Control/ Personal Protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Face shield and safety glasses 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.

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 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.

Control of environmental exposure

Do not let product enter drains.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: Powder Color: beige
b) Odor	Stench
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	900 - 975°C (1652 - 1787 °F)
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	This product is not flammable
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	Not applicable for inorganic substances
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available

10. Stability and Reactivity

10.1Reactivity

No data available

10.2Chemical stability

Sensitive to moisture

10.3Possibility of hazardous reactions

No data available

10.4Conditions to avoid

Contact with acids liberates very toxic gas. Avoid moisture

10.5Incompatible materials

Do not store near acids.

10.6Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 240 mg/kg

Remarks: Behavioral:Tremor.Behavioral:Convulsions or effect on seizure threshold.Skin and Appendages: Other: Hair.(RTECS)

Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation

Causes skin burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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.

Reproductive toxicity

Lithium and its compounds are possible teratogens by analogy to lithium carbonate which has equivocal human teratogenic data and positive animal teratogenic data.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: OJ6439500

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. Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to lithium ion., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment PBT/vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available.

13. Disposal Considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and container.

14. Transport Information

DOT (US)

UN number: 2923 Class: 8 (6.1) Packing group: II
Proper shipping name: Corrosive solids, toxic, n.o.s. (Lithium sulfide)
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG

UN number: 2923 Class: 8 (6.1) Packing group: II EMS-No: F-A, S-B
Proper shipping name: CORROSIVE SOLID, TOXIC, N.O.S. (Lithium sulfide)

IATA

UN number: 2923 Class: 8 (6.1) Packing group: II
Proper shipping name: Corrosive solid, toxic, n.o.s. (Lithium sulfide)

15. Regulatory Information

SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

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 the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

Lithium sulfide	CAS-No. 12136-58-2	Revision Date

New Jersey Right to Know Components

Lithium sulfide	CAS-No. 12136-58-2	Revision Date

16. Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, it does not represent any guarantee of the properties of the product. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes.