

SAFETY DATA SHEET

Preparation Date: 06/05/2015

Revision date 04/11/2019

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: L1125
Product Name: LITHIUM SULFATE, MONOHYDRATE, CRYSTAL, REAGENT, ACS

Other means of identification

Synonyms: Lithium Mesosulfate
 Sulfuric acid, dilithium salt, monohydrate
CAS #: 10102-25-7
RTECS # OJ6419000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
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Label elements

Warning

Hazard statements
 Harmful if swallowed



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Lithium Sulfate, Monohydrate	10102-25-7	100

4. FIRST AID MEASURES

First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If eye irritation persists, consult a specialist.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

- Symptoms**
- Harmful if swallowed
 - May cause eye irritation
 - May cause skin irritation
 - Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea
 - Dehydration

Salivation
May affect behavior/central nervous system
Irritability
lethargy
Muscle weakness
Confusion
Disorientation
Drowsiness
Convulsions
Coma
Anxiety
Delirium
stupor
Ataxia
Sedation
Tremors
Blurred vision
Twitching
Slurred speech
It may affect the kidneys
May affect the cardiovascular system
It may affect metabolism

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Dry chemical. Carbon dioxide (CO₂). Water spray mist, or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products Sulfur oxides. Lithium oxides.

Specific hazards May be combustible at high temperatures.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents
Moisture

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Lithium Sulfate, Monohydrate	10102-25-7	None	None	None	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Lithium Sulfate,	10102-25-7	None	None	None	None

Monohydrate					
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Australia and Mexico

Component	CAS No	Australia	Mexico
Lithium Sulfate, Monohydrate	10102-25-7	None	None

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles or Safety glasses with side-shields.
- Skin and body protection:** Long sleeved clothing
Chemical resistant apron
Gloves
- Respiratory protection:** Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Crystalline powder.	Color: White.
Odor: No information available.	Taste No information available.	Formula Li2SO4.H2O
Molecular/Formula weight (g/mole): 127.96	Flammability (solid, gas) Non-flammable	Flashpoint (°C/°F): No information available
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 880°C/ 1616°F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm3): No information available

Specific gravity:

2.06	pH No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Soluble in cold water Insoluble in Acetone	

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents
Loses all water at temperature above 120°C

Chemical stability

Stability: Hygroscopic. Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials. Exposure to moisture.

Incompatible Materials: Oxidizing agents
Moisture

Hazardous decomposition products: Sulfur oxides. Lithium oxides.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Lithium Sulfate, Monohydrate	
CAS No	10102-25-7

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available

Product code: L1125

Product name: LITHIUM SULFATE,
MONOHYDRATE, CRYSTAL,
REAGENT, ACS

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LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
Value - Acute Tox = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
Value - Acute Tox = No information available

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Inhalation May cause irritation of the mucous membranes and upper respiratory tract.

Ingestion May cause gastrointestinal tract irritation with nausea, vomiting, abdominal pain, diarrhea, dehydration, and salivation. It may also affect behavior/central nervous system. Some effects of acute mild overexposure may include: impaired concentration, irritability, lethargy, muscle weakness; effects of moderate overexposure may include: mental confusion, disorientation, drowsiness; effects of severe overexposure may include convulsions and coma. Other symptoms of overexposure may include anxiety, spasticity, delirium, stupor, ataxia, sedation, fine and gross tremor, giddiness, blurred vision, twitching, slurred speech, and apathy. Acute severe overexposure may also affect the kidneys (renal dysfunction, albuminuria, oliguria, and degenerative changes), cardiovascular system (cardiac arrhythmias, hypotension),.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Most poisonings are caused by chronic exposure.
Skin: May cause various types of dermatitis including psoriasis, alopecia, cutaneous ulcers, acne, follicular papules, xerosis cutis, exfoliate dermatitis.
Ingestion: Prolonged or repeated ingestion may affect metabolism (anorexia,

weight loss, emaciation), kidneys, and behavior/central nervous system (symptoms similar to acute exposure), and peripheral nervous system. To the best of our knowledge, the toxicological properties of this substance have not been fully investigated.

Sensitization: No information available.

Mutagenic Effects: May affect genetic material

Carcinogenic effects: Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Lithium Sulfate, Monohydrate	10102-25-7	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: Crosses the placenta in humans
Excreted in maternal milk in human

Developmental Effects: No information available

Teratogenic Effects: Lithium/Lithium compounds and Iodides pass through the placental barrier and enter human breast milk. It should be noted that the role for Lithium/Lithium compounds in producing human birth defects is not universally accepted. It has been debated as to whether or not the use of lithium or lithium compounds during pregnancy increase the risk of congenital heart disease or malformations. Teratogenicity studies in laboratory mammals give conflicting results. Some studies have found lithium administration to pregnant rats and mice to be associated with an increase in birth defects in some offspring, while others have given negative results in mice, rats, rabbits and monkeys. A comprehensive assessment of the developmental toxicity of lithium/lithium compounds concluded that occupational and environmental exposures to lithium/lithium compounds are not likely to have adverse effects. Case reports have described the induction of goiter and hypothyroidism in neonates prenatally exposed to lithium/lithium compounds and iodides.

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: Kidneys. Nervous system. Central nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Lithium Sulfate, Monohydrate	10102-25-7	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR

UN Number Not regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Packing group No information available
Subsidiary Risk: No information available

IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID

UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available

ICAO (air)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA

UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available
Precautionary Statements - Response No information available
Special Provisions No information available

15. REGULATORY INFORMATION**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
<i>Lithium Sulfate, Monohydrate</i>	10102-25-7	Not listed; Lithium Sulfate Monohydrate (CAS no.10102-25-7) is exempt from TSCA 8(b) Inventory listing since it is a hydrate. However, the anhydrous form (CAS no.10377-48-7) is listed as ACTIVE on the TSCA 8(b) Inventory.	Not present	Present	Not present	Present	Present	Not present

U.S. Regulations**Product code:** L1125**Product name:** LITHIUM SULFATE, MONOHYDRATE, CRYSTAL, REAGENT, ACS**Page** 10 / 12

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Lithium Sulfate, Monohydrate	10102-25-7	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Lithium Sulfate, Monohydrate	10102-25-7	None	None	None	None	None

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Lithium Sulfate, Monohydrate	10102-25-7	Not Applicable	Not Applicable

Canada**WHMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

Component
Lithium Sulfate, Monohydrate
10102-25-7 (100)

WHMIS 2015 Hazard Classification
Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Lithium Sulfate, Monohydrate	10102-25-7	Not Listed	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Lithium Sulfate, Monohydrate	10102-25-7	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Lithium Sulfate, Monohydrate	10102-25-7	Not listed

EU Classification**Product code:** L1125**Product name:** LITHIUM SULFATE, MONOHYDRATE, CRYSTAL, REAGENT, ACS**Page** 11 / 12

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Lithium Sulfate, Monohydrate	10102-25-7	

EU - CLP (1272/2008)

R-phrase(s)

R22 - Harmful if swallowed

S -phrase(s)

S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label
 S36 - Wear suitable protective clothing

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Lithium Sulfate, Monohydrate	10102-25-7		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful

Xn

**16. OTHER INFORMATION**

Preparation Date: 06/05/2015
 Revision date: 04/11/2019
 Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet