

## SAFETY DATA SHEET

Preparation Date: 06/05/2015

Revision date 04/11/2019

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** L1124  
**Product Name:** LITHIUM SULFATE, ANHYDROUS, REAGENT

#### Other means of identification

**Synonyms:** Lithium sulphate  
 Sulfuric acid, dilithium salt  
 Sulfuric acid, lithium salt (1:2)  
**CAS #:** 10377-48-7  
**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 |
|-----------------------|------------|

#### 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, Anhydrous | 10377-48-7 | 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  
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 (CO<sub>2</sub>). 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. Remove all sources of ignition.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. 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, Anhydrous | 10377-48-7 | None | None  | None  | None      |

##### **Canada**

| Component                  | CAS No     | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|----------------------------|------------|------------------|---------------------------|------------------|-----------------|
| Lithium Sulfate, Anhydrous | 10377-48-7 | None             | None                      | None             | None            |

## Australia and Mexico

| Component                  | CAS No     | Australia | Mexico |
|----------------------------|------------|-----------|--------|
| Lithium Sulfate, Anhydrous | 10377-48-7 | 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

|  |  |  |
|--|--|--|
| <b>Physical state:</b><br>Solid                                | <b>Appearance:</b><br>No information available.                      | <b>Color:</b><br>White.  |
| <b>Odor:</b><br>Odorless.                                      | <b>Taste</b><br>No information available.                            | <b>Formula</b><br>Li <sub>2</sub> SO <sub>4</sub>                    |
| <b>Molecular/Formula weight (g/mole):</b><br>109.94            | <b>Flammability (solid, gas)</b><br>Non-flammable                    | <b>Flashpoint (°C/°F):</b><br>No information available               |
| <b>Flash Point Tested according to:</b><br>Not available       | <b>Autoignition Temperature (°C/°F):</b><br>No information available | <b>Lower Explosion Limit (%):</b><br>No information available        |
| <b>Upper Explosion Limit (%):</b><br>No information available  | <b>Melting point/range(°C/°F):</b><br>845-859°C/ 1553-1578°F         | <b>Decomposition temperature(°C/°F):</b><br>No information available |
| <b>Boiling point/range(°C/°F):</b><br>No information available | <b>Bulk density:</b><br>No information available                     | <b>Density (g/cm<sup>3</sup>):</b><br>No information available       |
| <b>Specific gravity:</b><br>2.22                               | <b>pH</b><br>No information available                                | <b>Vapor pressure @ 20°C (kPa):</b><br>No information available      |

**Evaporation rate:**

**Product code:** L1124

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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

## 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, Anhydrous

CAS No 10377-48-7

**LD50/oral/rat** = 613 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 1190 mg/kg Oral LD50 Mouse  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**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 = 613 mg/kg

### LD50/oral/mouse =

Value - Acute Tox Oral = 1190 mg/kg

### 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** Harmful if swallowed. 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, Anhydrous | 10377-48-7 | 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, Anhydrous | 10377-48-7 | 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

|                                   |
|-----------------------------------|
| <b>15. REGULATORY INFORMATION</b> |
|-----------------------------------|

**International Inventories**

| Component                  | CAS No     | U.S. TSCA       | KOREA KECL       | Philippines (PICCS) | Japan ENCS      | China IECSC | Australia (AICS) | EINECS-No.        |
|----------------------------|------------|-----------------|------------------|---------------------|-----------------|-------------|------------------|-------------------|
| Lithium Sulfate, Anhydrous | 10377-48-7 | Present(ACTIVE) | Present KE-22591 | Present             | Present (1)-769 | Present     | Present          | Present 233-820-4 |

**U.S. Regulations****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, Anhydrous | 10377-48-7 | 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, Anhydrous | 10377-48-7 | 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, Anhydrous | 10377-48-7 | Not Applicable  | Not Applicable                         |

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Lithium Sulfate, Anhydrous  
10377-48-7 ( 100 )

WHMIS 2015 Hazard Classification  
Not a dangerous product according to HPR classification criteria

**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, Anhydrous | 10377-48-7 | Present      | Not Listed    |

| Component                  | CAS No     | CEPA Schedule I - Toxic Substances                          |
|----------------------------|------------|---|
| Lithium Sulfate, Anhydrous | 10377-48-7 | Not listed  |
| Component                  | CAS No     | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Lithium Sulfate, Anhydrous | 10377-48-7 | Not listed  |

## EU Classification

### EU GHS - SV - CLP 1272/2008

| Component                  | CAS No     | EU GHS - SV - CLP (1272/2008) |
|----------------------------|------------|-------------------------------|
| Lithium Sulfate, Anhydrous | 10377-48-7 |                               |

### EU - CLP (1272/2008)

### **R-phrase(s)**

R22 - Harmful if swallowed

### **S -phrase(s)**

S22 - Do not breathe dust

S46 - If swallowed, seek medical advice immediately and show this container or label

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

| Component                  | CAS No     | Classification | Concentration Limits: | Safety Phrases |
|----------------------------|------------|----------------|-----------------------|----------------|
| Lithium Sulfate, Anhydrous | 10377-48-7 |                | No information        |                |

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

### Indication of danger:

**Product code:** L1124

**Product name:** LITHIUM SULFATE,  
ANHYDROUS, REAGENT

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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**