

Section 1 - Chemical Product and Company Identification

MSDS Name: Lithium Sulfate, Monohydrate
Catalog Numbers: L/2400/53, L/2450/48
Synonyms: Sulfuric Acid, Dilithium Salt
Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG
For information in Europe, call: (01509) 231166
Emergency Number, Europe: 01509 231166

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 10102-25-7
Chemical Name: Lithium Sulfate
%: 100
EINECS#: unlisted
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: XN



Risk Phrases: 22 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! The toxicological properties of this material have not been fully investigated. Harmful if swallowed. Causes eye, skin, and respiratory tract irritation. Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. Large doses of lithium may cause dizziness, prostration, and kidney damage. Dehydration, weight loss, slurred speech, blurred vision, sensory loss, ataxia (failure of muscular coordination), tremors, and convulsions may occur.

Inhalation: Causes respiratory tract irritation. May be harmful if inhaled.

Chronic: Chronic exposure to lithium salts may cause drowsiness, visual abnormalities, weakness, ringing in the ears, and muscle tremors.

Section 4 - First Aid Measures

Eyes: Get medical aid. Immediately flush eyes with plenty of water for at least 15 minutes.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid. Wash mouth out with water.

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If

Inhalation: breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: Not available.

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 2; flammability: 0; instability: 1;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid breathing dust, mist, or vapor. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Lithium Sulfate	none listed	none listed	none listed
Lithium sulfate, anhydrous	none listed	none listed	none listed

OSHA Vacated PELs: Lithium Sulfate: None listed Lithium sulfate, anhydrous: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: white

Odor: None reported.

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 860 deg C (1,580.00°F)

Decomposition Temperature: Not available

Solubility in water: Soluble in water.

Specific Gravity/Density:

Molecular Formula: Li2SO4.H2O

Molecular Weight: 109.9396

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid:	Incompatible materials, dust generation, exposure to moist air or water.
Incompatibilities with Other Materials	Not available
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, sulfur oxides (SOx), including sulfur oxide and sulfur dioxide, lithium oxide.
Hazardous Polymerization	Has not been reported.

Section 11 - Toxicological Information

RTECS#:	CAS# 10102-25-7: None listed CAS# 10377-48-7: OJ6419000 RTECS: Not available. RTECS:
LD50/LC50:	CAS# 10377-48-7: Oral, mouse: LD50 = 1190 mg/kg; Oral, mouse: LD50 = 1190 mg/kg; Oral, rat: LD50 = 613 mg/kg;
Carcinogenicity:	Lithium Sulfate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Lithium sulfate, anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not Regulated

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 10102-25-7: Not available

CAS# 10377-48-7: 1

Canada

CAS# 10377-48-7 is listed on Canada's DSL List

Canadian WHMIS Classifications: D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 10102-25-7 is not listed on Canada's Ingredient Disclosure List.

CAS# 10377-48-7 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 10102-25-7 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form in on the Inventory (40CFR720.3(u)(2)).

CAS# 10377-48-7 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 5/08/1998

Revision #5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
