

MATERIAL SAFETY DATA SHEET**LITHIUM DODECYL SULPHATE**

PRODUCT CODE NUMBER(S): 4490-5

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: *Lithium dodecyl sulphate*
Chemical Family: *Lithium compound*
Chemical Formula: $C_{12}H_{25}LiO_4S$
Product Use: *Laboratory reagent*
Manufacturer's Name and Address:
Caledon Laboratories Ltd.
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HAZARDOUS INGREDIENTS OF MATERIALS

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Lithium dodecyl sulphate</i>	<i>>98</i>	<i>Not established</i>	<i>2044-56-6</i>

PHYSICAL DATA

Physical State: *Solid*
Odour and Appearance: *White, odourless powder or crystals*
Odour Threshold (ppm): *Not applicable*
Vapour Pressure (mm Hg): *Not available*
Vapour Density (Air = 1): *Not applicable*
Evaporation Rate: *Not applicable*
Boiling Point (°C): *66°C*
Melting Point (°C): *Not available*
pH: *Not available*
Specific Gravity: *Not available*
Coefficient of Water/Oil distribution: *Not available*

SHIPPING DESCRIPTION

UN: *Not regulated*
T.D.G. Class: *Not regulated*
Pkg. Group: *Not regulated*

REACTIVITY DATA

Chemical Stability: *Stable*
Incompatibility with other substances: *May react violently with strong acids, strong oxidizing agents.*
Reactivity: *Avoid heat, generation of dust, all incompatible materials.*
Hazardous Decomposition Products: CO_2 , SO_x , H_2S , *metal oxides*

FIRE AND EXPLOSION DATA

Flammability: *Not combustible. Will not burn or support combustion.*
Extinguishing Media: *Use an extinguisher appropriate to the surrounding material that is burning. Use water spray or fog to cool containers, and disperse vapours. Fight fire from upwind, from a safe distance. Firefighters must wear protective equipment (positive-pressure, full face-piece self-contained breathing apparatus) and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.*
Flash Point (Method Used): *Not applicable*
Autoignition Temperature: *Not applicable*
Upper Flammable Limit (% by volume): *Not applicable*
Lower Flammable Limit (% by volume): *Not applicable*
Hazardous Combustion Products: *Toxic, irritating fumes, CO_2 , SO_x , H_2S , metal oxides*
Sensitivity to Impact: *None identified*
Sensitivity to Static discharge: *None identified*

TOXICOLOGICAL PROPERTIES AND HEALTH DATA

To the best of our knowledge, the physical, chemical and toxicological properties of this product have not yet been thoroughly investigated.

Toxicological Data:

LD₅₀: *Not available*
LC₅₀: *Not available*

Effects of Acute Exposure to Product:

Inhaled: *No human or animal information available. High concentrations of mist or dust may be irritating. Severe overexposure by inhalation may cause systemic poisoning with nausea, vomiting, diarrhea, drowsiness, slurred speech, blurred vision, irregular eye movements, weakness, incoordination, lethargy, heart and brain effects, tremors, thyroid changes, renal failure.*

In contact with skin: *No human or animal information available. Probably not irritating.*

In contact with eyes: *No human or animal information available; may cause mechanical irritation, redness, itching.*

Ingested: *No human or animal information available; may cause irritation. Ingestion of large amounts of lithium salts (4 to 6 g) can cause vomiting, diarrhea, blurring of vision, tinnitus, weakness, staggering, tremor, or even death. Symptoms may be delayed for several hours. Ingestion is not a typical route of occupational exposure.*

Effects of Chronic Exposure to Product:

Lithium salts are given to humans therapeutically to produce plasma levels of 0.6 to 1.5 meq/L. Gastrointestinal effects, such as vomiting, diarrhea, loss of appetite, excessive thirst and urination, weakness, drowsiness, tremor, muscle twitch-

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ing, slurred speech can occur with plasma levels of 1 meq/L. Kidney damage may result if sodium intake is limited. When plasma levels exceed 2 meq/L serious side effects, irregular heart beat, low blood pressure, circulatory failure, seizures, coma and death can occur.

Carcinogenicity: No information available

Teratogenicity: Lithium salts cross placental barrier, and have caused heart defects in a small number of cases. In animal testing, teratogenic at doses toxic to the mother.

Reproductive Effects: No human data available. Lithium salts have caused decreased fertility of male rats at toxic levels.

Mutagenicity: No information available

Synergistic Products: Dehydration and restricted sodium intake may enhance the toxicity of lithium salts.

PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation required.

Respiratory Protection: Dust/mist mask. For conditions where dust or mist is present, to the maximum use specified by the respirator supplier, NIOSH/OSHA approved half-face high-efficiency dust/mist filter respirator, or NIOSH/OSHA approved full face-piece high-efficiency dust/mist filter respirator. Higher or unknown concentrations, or for fire or spill conditions, self-contained breathing apparatus, or full face-piece, positive-pressure supplied-air respirator.

Eye Protection: Chemical safety goggles and/or face shield.

Skin Protection: Natural or nitrile rubber, or neoprene gloves. Other impervious protective clothing, sleeves, apron, coverall, boots, sufficient to prevent contact.

Other Personal Protective Equipment: Safety shower and eye-wash fountain in work area.

Leak and Spill Procedure: Ventilate area. Cleanup personnel must be thoroughly trained in the hazards of this chemical and its safe use, and must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes. Prevent from entering sewers and waterways. Contain spill with inert material (earth, sand, inert absorbent). Avoid generating dust. Collect in suitable, labelled, covered containers for disposal. Flush area of spill with large amounts of running water.

Waste Disposal: Follow all federal, provincial and local regulations for disposal.

Handling Procedures and Equipment: Can be toxic with chronic exposure. Workers using this chemical must be thoroughly trained in its hazards and its safe use, and must wear appropriate protective equipment and clothing. Prevent release of dusts into workplace air. Avoid contact and inhalation. Use the smallest possible amount for the purpose, in designated areas with adequate ventilation. Keep work area clean and free of extraneous materials. Keep containers closed when not in use and when empty. Wash thoroughly after handling.

Storage Requirements: Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible materials. Keep containers tightly closed when not in use and when empty. Protect from damage.

FIRST AID MEASURES

Specific Measures:

Eyes: Flush eyes thoroughly with gently running water, holding eyelids open while flushing, for five to ten (5-10)

minutes, or until no trace of chemical remains. If irritation persists, get medical attention.

Skin: Remove contaminated clothing. Brush or wipe off dry material. Wash skin with plenty of water until no evidence of chemical remains. If irritation persists, get medical attention.

Inhalation: Remove to fresh air. Give oxygen and get medical attention for any breathing difficulty.

Ingestion: If victim is alert and NOT convulsing, rinse mouth, give several glasses of water to drink to dilute. If discomfort occurs, or if a large amount has been ingested, get medical attention.

REFERENCES USED

CCINFO disc

Budavari: *The Merck Index*, 12th ed., 1997

Sax, Lewis: *Hawley's Condensed Chemical Dictionary*, 11th ed., 1987

Suppliers' Material Safety Data Sheets

ADDITIONAL INFORMATION

Date Issued: June 15, 1998

Revision: November 2009

MSDS: 4490-5

Proposed WHMIS Designation: D2B (chronic ingestion)

Prepared by: Caledon Laboratories Ltd. (905) 877-0101
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