Lithium aluminum deuteride

sc-257672

Hazard Alert Code Key: EXTREME HIGH MODERATE LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Lithium aluminum deuteride

STATEMENT OF HAZARDOUS NATURE

NFPA

SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY:
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

PRODUCT USE
Reducing agent for introduction of deuterium group

SYNONYMS
AI-D4-Li, Li-Al-D4, "lithium aluminum deuteride", "lithium aluminum tetadeuteride", "lithium aluminium tetadeuteride", "lithium tetadeuteroaluminate", "aluminate, tetadeutero-, lithium", "lithium aluminodeuteride", "aluminum lithium deuteride", "aluminium lithium deuteride", "lithium alanate", LAD

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Toxicity</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Body Contact</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Chronic</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

CANADIAN WHMIS SYMBOLS

Material Safety Data Sheet

The Source is Question
EMERGENCY OVERVIEW

RISK
Contact with water liberates extremely flammable gases.
Risk of serious damage to eyes.
Irritating to respiratory system and skin.
Extremely flammable.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
- Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the esophagus and stomach may experience burning pain; vomiting and diarrhea may follow.
- Accidental ingestion of the material may be damaging to the health of the individual.
- Lithium, in large doses, can cause dizziness and weakness. If a low salt diet is in place, kidney damage can result.

EYE
- If applied to the eyes, this material causes severe eye damage.
- Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris.

SKIN
- This material can cause inflammation of the skin on contact in some persons.
- The material can produce severe chemical burns following direct contact with the skin.
- Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasions.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Solution of material in moisture on the skin, or perspiration, may markedly increase skin corrosion and accelerate tissue destruction.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED
- The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
- Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane.
- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
- Inhalation of quantities of liquid mist may be extremely hazardous, even lethal due to spasm, extreme irritation of larynx and bronchi, chemical pneumonitis and pulmonary edema.

CHRONIC HEALTH EFFECTS
- Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue.
- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
- Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
- Lithium compounds can affect the nervous system and muscle. This can cause tremor, inco-ordination, spastic jerks and very brisk reflexes. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS RN</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>lithium aluminium deuteride</td>
<td>14128-54-2</td>
<td>&gt;98</td>
</tr>
<tr>
<td>reacts with water to generate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lithium hydroxide</td>
<td>1310-66-3</td>
<td></td>
</tr>
<tr>
<td>hydrogen</td>
<td>1333-74-0</td>
<td></td>
</tr>
</tbody>
</table>

(as deuterium)

Section 4 - FIRST AID MEASURES

SWALLOWED
- For advice, contact a Poisons Information Center or a doctor at once.
- Urgent hospital treatment is likely to be needed.
**EYE**
- If this product comes in contact with the eyes: · Immediately hold eyelids apart and flush the eye continuously with running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

**SKIN**
- If skin or hair contact occurs: · Immediately flush body and clothes with large amounts of water, using safety shower if available. · Quickly remove all contaminated clothing, including footwear.

**inhaled**
- If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

**NOTES TO PHYSICIAN**
- For acute or short-term repeated exposures to highly alkaline materials:
  · Respiratory stress is uncommon but present occasionally because of soft tissue edema.
  · Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
  · Clinical effects of lithium intoxication appear to relate to duration of exposure as well as to level.
  · Lithium produce a generalized slowing of the electroencephalogram; the anion gap may increase in severe cases.
  · Emesis (or lavage if the patient is obtunded or convulsing) is indicated for ingestions exceeding 40 mg (Li)/Kg.

### Section 5 - FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapour Pressure (mmHg)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Specific Gravity (water=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**EXTINGUISHING MEDIA**
- **DO NOT USE WATER, CO2 OR FOAM ON SUBSTANCE ITSELF**

For SMALL FIRES:
- Dry chemical, soda ash or lime.

For LARGE FIRES:
- DRY sand, dry chemical, soda ash;

**FIRE FIGHTING**
- Alert Emergency Responders and tell them location and nature of hazard.
- May be violently or explosively reactive.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

**GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS**
- Solid in contact with water or moisture may generate sufficient heat to ignite combustible materials.
- May ignite on contact with air, moist air or water.
- May react vigorously or explosively on contact with water.

Combustion products include: metal oxides.

**FIRE INCOMPATIBILITY**
- Segregate from alcohol, water.
  · NOTE: May develop pressure in containers; open carefully. Vent periodically.
  · Keep dry.
  · Lithium aluminium hydride:
    · can burn in heated or moist air.
    · reaction with water is vigorous and produces flammable hydrogen gas.
    · at elevated temperatures the hydride may reduce carbon dioxide or sodium hydrogen carbonate to methane and ethane; these are probably the explosive reaction products produced when carbon dioxide extinguishers are used on lithium aluminium hydride fires.
    · reaction with hydroxy compounds such as alcohols and carboxylic acids is vigorous
    · reaction with oxidisers may be violent and presents a fire/explosion hazard.

**PERSONAL PROTECTION**

Glasses:
- Full face- shield.

Gloves:

Respirator:
- Particulate

### Section 6 - ACCIDENTAL RELEASE MEASURES

**MINOR SPILLS**
- Material from spill may be contaminated with water resulting in generation of gas which subsequently may pressure closed containers.
- Hold spill material in vented containers only and plan for prompt disposal.
- Eliminate all ignition sources.
- Cover with DRY earth, sand or other non-combustible material.

**MAJOR SPILLS**
- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.
Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
・ Avoid all personal contact, including inhalation.
・ Wear protective clothing when risk of overexposure occurs.

RECOMMENDED STORAGE METHODS
■ Glass container.
Storage containers must be hermetically sealed; the product must be stored under an inert, dry gas.
For low viscosity materials and solids: Drums and jerricans must be of the non-removable head type. Where a can is to be used as an inner package, the can must have a screwed enclosure.

STORAGE REQUIREMENTS
■ KEEP DRY! Packages must be protected from water ingress.
FOR MINOR QUANTITIES:
・ Store in an indoor fireproof cabinet or in a room of noncombustible construction and
・ provide adequate portable fire-extinguishers in or near the storage area.
Store under inert gas, e.g., argon.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

<table>
<thead>
<tr>
<th>Source</th>
<th>Material</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
<th>Peak ppm</th>
<th>Peak mg/m³</th>
<th>TWA F/CC</th>
<th>Notes</th>
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<tr>
<td>US - California Permissible Exposure Limits for Chemical Contaminants</td>
<td>lithium aluminium deuteride (Aluminum welding fumes)</td>
<td>5</td>
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<tr>
<td>Canada - British Columbia Occupational Exposure Limits</td>
<td>lithium hydroxide (Lithium hydroxide)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Canada - Ontario Occupational Exposure Limits</td>
<td>lithium hydroxide (Lithium hydroxide Anhydrous)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>US AIHA Workplace Environmental Exposure Levels (WEELs)</td>
<td>lithium hydroxide (Lithium Hydroxide)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances</td>
<td>hydrogen (Hydrogen)</td>
<td>(See Table 12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US - Oregon Permissible Exposure Limits (Z-1)</td>
<td>hydrogen (Hydrogen)</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ENDOELTABLE

PERSONAL PROTECTION

RESPIRATOR
Particulate
Consult your EHS staff for recommendations
EYE
- Chemical goggles.
- Full face shield.

HANDS/FEET
- Elbow length PVC gloves.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity
Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).
- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- Contaminated gloves should be replaced.
Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
- Neoprene gloves.

OTHER
- Protective overalls, closely fitted at neck and wrist.
- Eye-wash unit.

IN CONFINED SPACES:
- Non-sparking protective boots
- Static-free clothing.
- Ensure availability of lifeline.
Staff should be trained in all aspects of rescue work.

Rescue gear: Two sets of SCUBA breathing apparatus Rescue Harness, lines etc.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

ENGINEERING CONTROLS
- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
Solid.
Alkaline.

<table>
<thead>
<tr>
<th>State</th>
<th>Divided solid</th>
<th>Molecular Weight</th>
<th>41.99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Range (°F)</td>
<td>347 (decomposes)</td>
<td>Viscosity</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Range (°F)</td>
<td>Not available</td>
<td>Solubility in water (g/L)</td>
<td>Reacts</td>
</tr>
<tr>
<td>Flash Point (°F)</td>
<td>Not Applicable</td>
<td>pH (1% solution)</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temp (°F)</td>
<td>Not Available</td>
<td>pH (as supplied)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition Temp (°F)</td>
<td>Not available</td>
<td>Vapour Pressure (mmHG)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Applicable</td>
<td>Specific Gravity (water=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not Applicable</td>
<td>Relative Vapor Density (air=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Volatile Component (%vol)</td>
<td>Not applicable</td>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

APPEARANCE
White to grey powder; odourless. Very powerful reducer. It is hygroscopic and unstable in the presence of moisture. Reacts vigorously with water to produce lithium hydroxide and flammable hydrogen gas. Soluble in diethyl ether, tetrahydrofuran, dimethyloclosolve; slightly soluble in dibutyl ether; insoluble or very slightly soluble in hydrocarbons and dioxane. Decomposes above 175 C. to lithium deuteride, aluminium metal and deuterium.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY
- Presence of elevated temperatures.
- Presence of incompatible materials.
- May heat spontaneously
- Identify and remove sources of ignition and heating.
STORAGE INCOMPATIBILITY

- Lithium aluminium hydride:
  - Ignoites spontaneously in air and/or heat above 125 deg C.
  - Reacts violently with water, evolving heat, flammable hydrogen, aluminium, lithium hydride with possible ignition
  - Reacts violently with oxidisers, acids, alcohols, aldehydes, benzoyl peroxide, boron trifluoride, carbon dioxide, 3-chloromethylfuran, 1,2-dimethoxyethane, 3,5-dibromocyclopentene, ethers, ethyl acetate, fluoramides, glycols, ketones, nitrogenous organic compounds, perfluorosuccinamide, pyridine, tetrahydrofuran
  - Reacts violently with many standard fire extinguishers (water, foam, carbon dioxide, halogenated agents, or other dry powders)
  - Should be stored or packaged under argon or nitrogen gas

NOTE:
- Contact with ethyl acetate, acetonitrile or their vapours may result in violent explosion.
- Addition to ether solvents such as p-dioxane, tetrahydrofuran etc when peroxides are present may also result in explosion.
- Reduction of amides of fluorinated carboxylic acids has resulted in violent explosion.
- Addition to pyridine is highly exothermic and must be performed very slowly using small portions and cooling.
- Reaction with peroxides, hydroperoxides acyl peroxides etc is violent and explosive.
- When 4-bromocyclopentene was produced from crude 3,5-dicyclopentene, explosions have been reported on two occasions about one hour after the addition of dibromide.
- Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
- These trifluorides are hypergolic oxidisers. They ignite on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.
- The state of subdivision may affect the results.
- Inorganic reducing agents react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive.
- Their reactions with oxidizing agents may be violent.
- Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions.
- Contact with water liberates highly flammable gases.
- Segregate from alcohol, water.
- Avoid strong acids.
- Avoid contact with copper, aluminium and their alloys.
- NOTE: May develop pressure in containers; open carefully. Vent periodically.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

LITHIUM ALUMINIUM DEUTERIDE

TOXICITY AND IRRITATION
- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.
- Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

LITHIUM ALUMINIUM DEUTERIDE:

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (rat) LD50: 960 mg/kg Nil Reported</td>
<td></td>
</tr>
</tbody>
</table>

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

HYDROGEN:
- No significant acute toxicological data identified in literature search.

Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Section 13 - DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions
A. General Product Information
Reactivity characteristic: use EPA hazardous waste number D003 (waste code R).
Disposal Instructions
All waste must be handled in accordance with local, state and federal regulations.

For small quantities:
- Cautiously add the material to dry butanol in an appropriate solvent.
- Reaction may be vigorous and exothermic.

Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:
- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.
- Recycle where possible.
- Consult Waste Management Authority for disposal.

Section 14 - TRANSPORTATION INFORMATION

DOT:
- Symbols: None
- Hazard class or Division: 4.3
- Identification Numbers: UN1410 PG: I
- Label Codes: 4.3
- Special provisions: A19
- Packaging: Exceptions: None
- Packaging: Non-bulk: 211
- Passenger aircraft/rail:
  - Quantity Limitations: Cargo 15 kg
  - Vessel stowage: Location: E
  - Other: 52
- Hazardous materials descriptions and proper shipping names:
  - Lithium aluminum hydride

Air Transport IATA:
- ICAO/IATA Class: 4.3
- ICAO/IATA Subrisk: None
- UN/ID Number: 1410
- Packing Group: I
- Special provisions: None
- Cargo Only:
  - Packing Instructions: 412
  - Maximum Qty/Pack: 15 kg
  - Passenger and Cargo:
    - Passenger and Cargo:
      - Packaging Instructions: Forbidden
  - Passenger and Cargo Limited Quantity:
    - Packaging Instructions: -
    - Maximum Qty/Pack: -
  - Air transport may be forbidden if this material is flammable, corrosive or toxic gases may be released under normal conditions of transport.

Maritime Transport IMDG:
- IMDG Class: 4.3
- IMDG Subrisk: None
- UN Number: 1410
- packing group: I
- Special provisions: None
- Cargo Only:
  - Packing Instructions: F-G, S-M
- Limited Quantities: 0
- Shipping Name: LITHIUM ALUMINIUM HYDRIDE

Section 15 - REGULATORY INFORMATION

lithium aluminium deuteride (CAS: 14128-54-2) is found on the following regulatory lists:
- "Canada National Pollutant Release Inventory (NPRI)"
- "US - California Permissible Exposure Limits for Chemical Contaminants"
- "US - California Toxic Air Contaminant List Category IV"

Regulations for ingredients

lithium hydroxide (CAS: 1310-66-3,1310-65-2) is found on the following regulatory lists:
- "Canada - Ontario Occupational Exposure Limits"
- "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)"
- "US - Minnesota Hazardous Substance List"
- "US - New Jersey Right to Know Hazardous Substances"
- "US DOE Temporary Emergency Exposure Limits (TEELs)"

hydrogen (CAS: 1333-74-0) is found on the following regulatory lists:
- "Canada - Alberta Occupational Exposure Limits"
- "Canada - British Columbia Occupational Exposure Limits"
- "Canada - Nova Scotia Occupational Exposure Limits"
- "Canada - Prince Edward Island Occupational Exposure Limits"
- "Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)"
- "Canada - Saskatchewan Industrial Hazardous Substances"
- "Canada - Yukon Permissible Concentrations for Airborne Contaminants (English)"
- "Canada Domestic Substances List (DSL)"
- "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)"
- "International Council of Chemical Associations (ICCA) - High Production Volume List"
- "OECD Representative List of High Production Volume (HPV) Chemicals"
- "US - California Occupational Safety and
Ingredients with multiple CAS Nos
Ingredient Name CAS lithium hydroxide 1310-66-3, 1310-65-2

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For additional technical information please call our toxicology department on +800 CHEMCALL.

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
- A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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Issue Date: Dec-20-2009
Print Date: Jan-7-2011