

## Material Safety Data Sheet

Version 4.0

Revision Date 03/14/2010

Print Date 04/08/2010

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Lithium *tert*-butoxide

Product Number : 400173

Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd  
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OAKVILLE ON L6H 6J8  
CANADA

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## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## WHMIS Classification

E Corrosive Material  
F

Corrosive  
Unstable Reactive

## GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H251 Self-heating: may catch fire.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P235 + P410 Keep cool. Protect from sunlight.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/physician.

## HMIS Classification

Health hazard: 3  
Flammability: 0  
Physical hazards: 2

## Potential Health Effects

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Ingestion** Harmful if swallowed. Causes burns.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C<sub>4</sub>H<sub>9</sub>LiO

Molecular Weight : 80.05 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Lithium 2-methylpropan-2-olate</b>			
1907-33-1	217-611-5	-	-

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#### 4. FIRST AID MEASURES

##### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

##### **If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

##### **In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

##### **In case of eye contact**

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### **If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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#### 5. FIRE-FIGHTING MEASURES

##### **Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>) Dry powder

##### **Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

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#### 6. ACCIDENTAL RELEASE MEASURES

##### **Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

##### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

##### **Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Do not flush with water. Keep in suitable, closed containers for disposal.

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#### 7. HANDLING AND STORAGE

##### **Precautions for safe handling**

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

##### **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

Never allow product to get in contact with water during storage.

Moisture sensitive. Keep in a dry place.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	powder
Colour	beige

### Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Reacts violently with water.

### Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

### Materials to avoid

acids, Reducing agents, Oxygen, Water, Alcohols, Chlorinated solvents, Halogens

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Lithium oxides

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

LD50 Oral - mouse - 1,682 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Respiratory disorder

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure (GHS)**

no data available

**Specific target organ toxicity - repeated exposure (GHS)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Ingestion</b>	Harmful if swallowed. Causes burns.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.

**Signs and Symptoms of Exposure**

Large doses of lithium ion have caused dizziness and prostration, and can cause kidney damage if sodium intake is limited. Dehydration, weight loss, dermatological effects, and thyroid disturbances have been reported. Central nervous system effects that include slurred speech, blurred vision, sensory loss, ataxia, and convulsions may occur. Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to lithium ion., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache

**Additional Information**

RTECS: UB8520000

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**12. ECOLOGICAL INFORMATION****Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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### 13. DISPOSAL CONSIDERATIONS

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

#### DOT (US)

UN-Number: 3206 Class: 4.2 (8) Packing group: II  
Proper shipping name: Alkali metal alcoholates, self-heating, corrosive, n.o.s. (Lithium 2-methylpropan-2-olate)  
Marine pollutant: No  
Poison Inhalation Hazard: No

#### IMDG

UN-Number: 3206 Class: 4.2 (8) Packing group: II EMS-No: F-A, S-J  
Proper shipping name: ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S. (Lithium 2-methylpropan-2-olate)  
Marine pollutant: No

#### IATA

UN-Number: 3206 Class: 4.2 (8) Packing group: II  
Proper shipping name: Alkali metal alcoholates, self-heating, corrosive, n.o.s. (Lithium 2-methylpropan-2-olate)

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### 15. REGULATORY INFORMATION

#### DSL Status

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

Lithium 2-methylpropan-2-olate

CAS-No.  
1907-33-1

#### WHMIS Classification

E Corrosive Material  
F

Corrosive  
Unstable Reactive

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### 16. OTHER INFORMATION

#### Further information

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