

14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1

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### SECTION 1:Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name : Lithium hydroxide , anhydrous

Product Number : L128662
Brand : aladdin
CAS-No. : 1310-65-2

# 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION

Address : 14078 Meridian Parkway,

Riverside, CA. 92518

Telephone : +1 (833) 552-7181 Fax : no data available

### 1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300

CHEMTREC®. Outside the USA :

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 3), H331

Skin corrosion/irritation (Category 1), H314

Serious eye damage/eye irritation (Category 1), H318

Reproductive toxicity (Category 1A), H360

Specific target organ toxicity - single exposure (Category 1), H370

Short-term (acute) aquatic hazard (Category 3), H402

### 2.2 GHS Label elements, including precautionary statements



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Pictogram







Signal word Danger

Hazard statement(s)

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H331 Toxic if inhaled

H360 May damage fertility or the unborn child

H370 Causes damage to organs H402 Harmful to aquatic life

Precautionary statement(s)

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands [and ...] thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P363 Wash contaminated clothing before reuse.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN

with water [or shower].

P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor/...

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container to an approved waste disposal plant.

P301+P312+P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P304+P340+P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER/ doctor.

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. If contact lenses are

worn and can be easily removed, remove Contact lenses. Continue rinsing.

Immediately call an emergency center/doctor.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

# SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms : Anhydrous lithium hydroxide



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Formula : LiOH

Molecular weight : 23.95

CAS No. : 1310-65-2

EC-NO. : 215-183-4

Component	Classification	Concentration
Lithium hydroxide, anhydrous		
	no data available	99.9% metals basis

#### **SECTION 4: First aid measures**

## 4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

In case of skin contact

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

In case of eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

# 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

# **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

Unsuitable extinguishing media

no data available

#### 5.2 Special hazards arising from the substance or mixture



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Lithium oxides Not combustible. Ambient fire may liberate hazardous vapours

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

no data available

#### SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

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

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

#### 6.4 Reference to other sections

For disposal see section 13.

## **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

Operators should be specially trained and strictly abide by the operating procedures. Operation and disposal should be carried out in a place with local ventilation or general ventilation facilities. Avoid eye and skin contact and avoid breathing vapor. See Section 8 for personal protective measures. Keep away from fire and heat sources, and smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. If canning is required, the flow rate should be controlled, and there should be a grounding device to prevent the accumulation of static electricity. Avoid contact with incompatible substances such as oxidizing agents (see section 10 for incompatible substances). When handling, it should be lightly loaded and unloaded to prevent damage to packaging and containers. Empty containers may be harmful residues. Wash hands after use and prohibit eating or drinking in the workplace. Equipped with the corresponding variety and quantity of fire fighting equipment and leakage emer

# 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, ventilated warehouse. Strong moisture absorption, sensitive to carbon dioxide. Argon filled storage.



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# 7.3 Specific end use(s)

no data available

## **SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

## 8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

**Body Protection** 

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface 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).

Control of environmental exposure

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

#### SECTION 9: Physical and chemical properties

# 9.1 Information on basic physical and chemical properties

a) Appearance form: Crystals, Powder or Granules color: white

b) Odour no data available
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point no data available
f) Initial boiling point and boiling range no data available



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g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available

j) Upper/lower flammability or

explosive limits no data available k) Vapour pressure no data available I) Vapour density no data available m) Relative density no data available n) Water solubility no data available o) Partition coefficient: n-octanol/water no data available p) Auto-ignition temperature no data available q) Decomposition temperature no data available no data available r) Viscosity s) Explosive properties N no data available no data available t) Oxidizing properties N

# 9.2 Other safety information

no data available

## **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

# 10.3 Possibility of hazardous reactions

no data available

# 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Aluminum, Lead, Zinc, Tin

## 10.6 Hazardous decomposition products

no data available

### **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects

Acute toxicity



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LD50 Oral - Rat - 330 mg/kg Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - > 3.4 mg/l - dust/mist (OECD Test Guideline 403)

Dermal: No data available

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE) Result: Corrosive (OECD Test Guideline 435) Remarks: The value is given in analogy to the following substances: Lithium hydroxide monohydrate

Serious eye damage/eye irritation

Remarks: Causes serious eye damage. (ECHA)

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

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., Cyanosis and t-wave inversion have occurred in the breast-fed infants of women receiving lithium carbonate therapy., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## **SECTION 12: Ecological information**

#### 12.1 Toxicity

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - ca. 62.2 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 19.1 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (green algae) - 87.57 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - 180.8 mg/l - 3 h (OECD Test Guideline 209)



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Toxicity to fish(Chronic toxicity) semi-static test NOEC - Danio rerio (zebra fish) - ca. 9.90 mg/l - 34 d (OECD

Test Guideline 210) Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) semi-static test NOEC - Daphnia magna (Water flea) - 2.3 mg/l - 21 d (OECD Test Guideline 211)

#### 12.2 Persistence and degradability

Biodegradability Result: - Readily biodegradable. Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

## 12.3 Bioaccumulative potential

no data available

## 12.4 Mobility in soil

no data available

#### 12.5 Results of PBT and vPvB assessment

no data available

#### 12.6 Other adverse effects

no data available

#### **SECTION 13:**

### 13.1 Disposal considerations

**Product** 

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

## **SECTION 14: Transport information**

DOT (US)

UN number: 2680 Packing group: II Class: 8

Proper shipping name: LITHIUM Reportable Quantity(RQ): no data Poison Inhalation Hazard: no data

HYDROXIDE available available available

Environmental Hazards: no

**IMDG** 

UN number: 2680 Packing group: II EMS-No: no data available

Proper shipping name: LITHIUM HYDROXIDE

IATA



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UN number: 2680 Packing group: II Class: 8

Proper shipping name: LITHIUM HYDROXIDE

### **SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### **SECTION 16: Other information**

Regulatory Affairs

Prepared By ALADDIN SCIENTIFIC CORPORATION

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