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## SAFETY DATA SHEET

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

#### 1.1 Product identifiers

Product name : Lithium perchlorate  
Product Number : L110164  
Brand : aladdin  
CAS-No. : 7791-03-9

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

Identified uses : 仅供科研用途，不作为药物、家庭备用药或其它用途。

#### 1.3 Details of the supplier of the safety data sheet

Company : Shanghai Aladdin Biochemical Tech Co.,Ltd  
Address : 36 Xinjinqiao Road, Shanghai  
Telephone : 400-620-6333  
Fax : no data available

#### 1.4 Emergency telephone number

Emergency Phone : 0532-83889090

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Oxidizing solids (Category 2), H272

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H272

May intensify fire; oxidizer

H302

Harmful if swallowed

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H314	Causes severe skin burns and eye damage
H335	May cause respiratory irritation
<b>Precautionary statement(s)</b>	
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P220	Keep away from clothing and other combustible materials.
P221	Take any precaution to avoid mixing with combustibles/...
P261	Avoid breathing 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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P332+P313	IF SKIN irritation occurs: Get medical advice/attention.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use ... to extinguish.
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+P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. if you feel unwell.

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	: Anhydrous lithium perchlorate ; Perchloric Acid Lithium Salt
Formula	: LiClO <sub>4</sub>
Molecular weight	: 106.39
CAS No.	: 7791-03-9
EC-NO.	: 232-237-2

Component	Classification	Concentration
Lithium perchlorate	Ox. Sol. 2; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H272, H302, H315, H319, H335	anhydrous, 99.99% 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.

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**If inhaled**

After inhalation: fresh air.

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Remove contact lenses.

**If swallowed**

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

no data available

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

no data available

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**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**

no data available

**Unsuitable extinguishing media**

no data available

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

Hydrogen chloride gas Lithium oxides Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapours.

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

Use water spray to cool unopened containers.

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**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures consult an expert.

**6.2 Environmental precautions**

Don't let the product go down the drain.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition.

### 7.2 Conditions for safe storage, including any incompatibilities

Under Inert Atmosphere ; Keep the container closed and store it in a dry, ventilated and cool place.

### 7.3 Specific end use(s)

no data available

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## 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

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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 it is safe, prevent further leakage or spillage and do not allow the product to enter the sewer system.

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**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

a) Appearance	form: Powder, Crystals and/or Chunks color: White
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	236 °C
f) Initial boiling point and boiling range	no data available
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
l) Vapour density	no data available
m) Relative density	2.29
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
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

**9.2 Other safety information**

no data available

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

There is explosion risk associated with it: Combustible substance

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Risk of explosion with: combustible substances

**10.4 Conditions to avoid**

Avoid moisture.

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**10.5 Incompatible materials**

no data available

**10.6 Hazardous decomposition products**

no data available

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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

LD50 oral rat female - > 300 - < 2000 mg / kg (OECD Test Guideline 423)

Symptoms: irritating symptoms in the respiratory tract

Percutaneous: no data

**Skin corrosion/irritation**

Skin in vitro study Result: burns were caused- 60 minutes (OECD Test Guideline 431)

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

Test type: Ames test Test system: Salmonella typhimurium Metabolic activation: with or without metabolic activation  
Method: OECD Test Guideline 471 Results: negative

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**

Could cause respiratory irritation.

**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. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. The following applies to lithium compounds in general: when handled or used inappropriately, the absorption of large quantities is followed by CNS disorders, agitation, spasms, ataxia (impaired locomotor coordination) due to

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disturbed electrolyte balance. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Static toxicity test for Daphnia magna and other aquatic invertebrates EC50 - Daphnia magna - > 100 mg / L - 48 h (OECD Test Guideline 202)

Static toxicity test for algae EC50 - pseudokirchnerella subcapita (green algae) - > 120 mg / L - 72 h (OECD Test Guideline 201)

### 12.2 Persistence and degradability

This method for determining biodegradability is not applicable to inorganic compounds.

### 12.3 Bioaccumulative potential

No data

### 12.4 Mobility in soil

No data

### 12.5 Results of PBT and vPvB assessment

The PBT / vpvb assessment is not available because the chemical safety assessment is not required / carried out

### 12.6 Other adverse effects

Other ecological information During non professional operation and treatment, it is not excluded that environmental hazards may occur. Avoid discharge to the surrounding environment.

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## 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.

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## SECTION 14: Transport information

### DOT (US)

UN number: 1481

Packing group: II

Class: 5.1

Proper shipping name: Perchlorates, inorganic, n.o.s.

Reportable Quantity(RQ): no data available Poison Inhalation Hazard: no data

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Environmental Hazards: no data available

**IMDG**

UN number: 1481

Packing group: II

EMS-No: no data available

Proper shipping name: Perchlorates, inorganic, n.o.s.

**IATA**

UN number: 1481

Packing group: II

Class: 5.1

Proper shipping name: Perchlorates, inorganic, n.o.s.

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**SECTION 15: Regulatory information**

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

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**SECTION 16: Other information**

**Further information**

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