

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Trade name: Lithium Hydroxide Monohydrate
CAS number: 1310-65-2
EC number: 603-454-3

Relevant identified uses of the substance or mixture and uses advised against:

Relevant identified uses: Research and development. Laboratory Chemicals. Manufacture of substances.
Not suitable for use in: Not suitable for human consumption or veterinary purposes.

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008:

Classification: Serious eye damage, hazard category 1
Acute toxicity, oral, hazard category 4
Skin corrosion, hazard category 1B

Hazard statements: H302, H314, H318

Label elements:

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



Signal word: Danger

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Hazard statements: H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Precautionary statements: P261 Avoid breathing dust.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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.
P310 Immediately call a POISON CENTER/doctor.
P330 Rinse mouth.
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container to approved waste disposal facility.

Other hazards: No data available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures:

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Specific concentration Limits ATE	Note
Lithium Hydroxide Monohydrate	1310-66-3 603-454-3 - -	100%	Acute Tox. 4 - oral Eye Dam. 1 Skin Sens. 1B	H302 H314 H318 - -	-	-

Molecular weight: 41.96

Substance additional information: For the complete text of H- / EUH-statements mentioned in this section, see section 16.

4. FIRST AID MEASURES

Description of first aid measures:

IF exposed or concerned: Get medical advice/attention. First aiders/ medical personnel need to protect themselves.
Show this Safety Data Sheet (SDS) to medical personnel.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.

Skin contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.

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- Eye contact:** Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.
- Ingestion:** IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.
- Information for doctors:** No data available.

Most important symptoms and effects, both acute and delayed:

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. Causes burns by all exposure routes.

See section 11 for more detailed information on health effects and symptoms.

Inhalation: Single exposure may cause the following adverse effects: Causes severe burns. Difficulty in breathing. Unconsciousness, possibly death.

Skin contact: Single exposure may cause the following adverse effects: Causes severe burns. Blistering may occur. May be absorbed in the body and cause dizziness, nausea and vomiting. Unconsciousness, death.

Eye contact: Single exposure may cause the following adverse effects: Causes serious eye damage. Unconsciousness, possibly death.

Ingestion: Single exposure may cause the following adverse effects: Severe abdominal pain. May cause severe internal injury. Unconsciousness, possibly death.

Indication of any immediate medical attention and special treatment needed:

Treat symptomatically. Immediately call a POISON CENTER/doctor.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

Unsuitable extinguishing media: No specific firefighting procedure given.

Special hazards arising from the substance or mixture

Specific hazards: Corrosive.
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.
Carbon monoxide (CO).
Carbon dioxide (CO₂).
Lithium Oxides
Ambient fire may liberate hazardous vapours.

Advice for firefighters:

Special protective equipment for fire-fighters: Evacuate area. Avoid breathing gas, fume, vapours or spray. Prevent skin contact by maintaining a safe distance and by wearing suitable protective equipment/ clothing. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Do not breathe vapour/spray. Avoid contact with skin and eyes. For personal protection, see section 8. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up:

Collect with absorbent, non-combustible material into suitable containers.

Reference to other sections: For personal protection, see section 8. For waste disposal, see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling:

Preventive handling precautions: For precautions see section 2.2.

Work under hood Take action to prevent static discharges.

Wear protective clothing, gloves, eye and face protection.

Avoid contact with skin and eyes.

Avoid ingestion and inhalation.

General hygiene:

Observe good chemical hygiene practices.

Keep away from food, drink and animal feeding stuffs.

Wash contaminated skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Remove contaminated clothing and launder thoroughly before re-use.

Conditions for safe storage, including any incompatibilities:

Store in a dry place. Store in a closed container.

Store at ambient temperature.

Air sensitive.

Handle and store contents under inert gas.

Specific end use(s): No specific usage precautions noted.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Exposure limits: No occupational exposure limit assigned.

Exposure controls:

Eye / face protection: Wear eye protection.

Hand protection:

Wear protective gloves. No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

Wash contaminated skin thoroughly after handling.

Nitrile gloves are recommended.

Glove Thickness: 0.11mm

Breakthrough time: 480 mins

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- Other skin protection:** Wash skin thoroughly after handling.
- Respiratory protection:** Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.
- Environmental exposure controls:** Avoid discharge into drains. Risk of explosion.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Physical state:** Solid
- Colour:** No data available
- Odour:** No data available
- Melting point / freezing point:** 423.93°C / 795.07°F 1,013.25 hPa
- Boiling point or initial boiling point and boiling range:** No data available
- Flammability:** No data available
- Lower and upper explosion limit:** No data available
- Flash point:** No data available
- Auto-ignition temperature:** No data available
- Decomposition temperature:** No data available
- pH:** 12 50g/l 50°C / 122°F
- Kinematic viscosity:** No data available
- Solubility:** No data available
- Water solubility:** Slightly soluble in water.
- Partition coefficient n-octanol/water:** No data available
- Vapour pressure:** No data available
- Density and/or relative density:** 1.51 g/cm³ 20°C / 68°F
- Relative vapour density:** No data available
- Particle characteristics:** No data available
- Other information:** No data available

10. STABILITY AND REACTIVITY

- Reactivity:** There are no known reactivity hazards associated with this product.
- Chemical stability:** Stable under the prescribed storage conditions.
- Possibility of hazardous reactions:** Violent reactions possible with: Acids.
- Conditions to avoid:** Protect from moisture.
- Incompatible materials:** Strong oxidising agents.
Aluminium.
Lead.
Zinc.
Tin.

Hazardous decomposition products: See section 5.

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11. TOXICOLOGICAL INFORMATION

Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity: Based on available data, the classification criteria are not met.

Product/Substance name CAS/EC No.	Dose descriptor	Value/Dose	Exposure route	Duration of exposure	Test animals
Lithium hydroxide monohydrate 1310-66-3 / 603-454-3	Acute Toxicity (Oral LD50)	330 mg/kg	-	-	Rat
Lithium hydroxide monohydrate 1310-66-3 / 603-454-3	Acute Toxicity (Inhalation LC50)	3.4 mg/l	Dust	4 hours	Rat

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: Based on available data, the classification criteria are not met.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Information on other hazards:

Endocrine disrupting properties: This product does not contain any known or suspected endocrine disruptors.

12. ECOLOGICAL INFORMATION

Toxicity:

Acute toxicity:

Product / Substance name CAS / EC no.	Measurement type	Value/Result	Duration of exposure	Species
Lithium hydroxide monohydrate 1310-66-3 / 603-454-3	LC50	62.2 mg/l	96 hours	Brachydanio rerio (Zebra fish)

Acute crustacean toxicity:

Product / Substance name CAS / EC no.	Measurement type	Value/Result	Duration of exposure	Species
Lithium hydroxide monohydrate 1310-66-3 / 603-454-3	EC50	19.1 mg/l	48 hours	Water flea

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: No data available

Endocrine disrupting properties: This product does not contain any known or suspected endocrine disruptors.

Other adverse effects: No data available

[cont...]

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Disposal considerations: Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

UN number: 2680

UN proper shipping name:

ADR / RID / ADN proper shipping name: LITHIUM HYDROXIDE

IMDG proper shipping name: LITHIUM HYDROXIDE

IATA proper shipping name: Lithium hydroxide

Transport hazard class(es):

Label:

ADR/RID/ADN/IMDG/IATA: 8



ADR / RID Class: 8

ADR / RID Classification code: C6

ADR / RID hazard identification number: 80

IMDG Class: 8

IATA Class: 8

ADN Class: 8

ADN Class Code: C6

Packing group

ADR / RID / ADN: II

IMDG: II

IATA: II

Environmental hazards: No

IMDG Marine Pollutant: No

Special precautions for user:

Tunnel restriction code: E

Transport category: 2

IMDG EmS: F-A, S-B

Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC08

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15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

National regulations: No data available.

Chemical safety assessment: No chemical safety assessment has been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Phrase meaning: Eye Dam. 1 - Serious eye damage, hazard category 1
Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4
Skin Corr. 1B - Skin corrosion, hazard category 1B
Skin Sens. 1B - Skin sensitisation, hazard category 1, sub-category 1B
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.