

Lithium hydroxide.1aq a.r.; Lithium hydroxide.1aq a.r.

Revision: 25.09.2025

Product code: AC13.00170

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Lithium hydroxide.1aq a.r.; Lithium hydroxide.1aq a.r.

REACH Registration Number: 01-2119560576-31-XXXX
CAS No: 1310-66-3**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**Reagents and laboratory chemicals
Only for laboratory and analysis purposes.**Uses advised against**

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet**Details of the supplier of the safety data sheet**

Company name: AnalytiChem Services, Unipessoal, Lda
Street: Rua de Júlio Dinis 676 7º
Place: N-4050-320 Porto
Telephone: +351 226002917
E-mail: info@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Internet: www.analytichem.com
Responsible Department: SDS service department

Supplier or manufacturer details

Company name: AnalytiChem Belgium NV
Street: Industriezone "De Arend" 2
Place: B-8210 Zedelgem
Telephone: +32 50 28 83 20
E-mail: info.be@analytichem.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Responsible Department: AnalytiChem
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333
+44 20 3807 3798 (CHEMTREC)

1.4. Emergency telephone number:

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Further Information

No data available

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 4; H302

Skin Corr. 1B; H314

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008**

Signal word: Danger

Pictograms:

**Hazard statements**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1. Substances**Sum formula: $\text{LiOH} \cdot \text{H}_2\text{O}$

Molecular weight: 41,96 g/mol

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
1310-66-3	Lithium hydroxide monohydrate			100 %
			01-2119560576-31-0002	
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1; H302 H314 H318			

Full text of H and EUH statements: see section 16.

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
1310-66-3		Lithium hydroxide monohydrate	100 %
	inhalation: LC50 = > 6,15 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 363 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.

Call a physician immediately.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water.

Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Dizziness

Gastrointestinal complaints

Vomiting

Cyanosis (blue coloured blood)

Dyspnoea

May cause damage to organs. (kidneys, thyroid gland, central nervous system)

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

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**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

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5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Avoid contact with skin, eyes and clothes.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Avoid contact with skin, eyes and clothes.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Use personal protection equipment.

Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Do not breathe dust. Avoid dust formation.

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Use extractor hood (laboratory).

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Further information on handling

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Corrosive to metals.

Unsuitable container/equipment material: Metal, Aluminium, Tin, Zinc

Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage

Take national regulations into account.

Further information on storage conditions

Store in a dry place.

Keep container tightly closed.

storage temperature +15°C - +25°C

Handle and store contents under inert gas. Protect from moisture.

Protect against: Air

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
	DNEL type			
1310-66-3	Lithium hydroxide monohydrate			
	Worker DNEL, long-term	inhalation	systemic	10 mg/m ³
	Worker DNEL, acute	inhalation	systemic	30 mg/m ³
	Worker DNEL, long-term	dermal	systemic	41,35 mg/kg bw/day
	Worker DNEL, acute	dermal	systemic	100 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	6,21 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	41,35 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	4,13 mg/kg bw/day
	Consumer DNEL, acute	oral	systemic	12,4 mg/kg bw/day

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PNEC values

CAS No	Substance	
Environmental compartment		Value
1310-66-3	Lithium hydroxide monohydrate	
Freshwater		2,3 mg/l
Freshwater (intermittent releases)		0,344 mg/l
Marine water		0,23 mg/l
Freshwater sediment		9 mg/kg
Marine sediment		0,9 mg/kg
Micro-organisms in sewage treatment plants (STP)		79,2 mg/l
Soil		0,45 mg/kg

8.2. Exposure controls**Appropriate engineering controls**

Do not breathe dust. Avoid dust formation.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

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Respiratory protection

Respiratory protection necessary at: dust formation

Filtering device with filter or ventilator filtering device of type: P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

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

Physical state:	solid
Colour:	colourless / light yellow
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	424 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not applicable
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	12 (0,4g/l)
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	216 g/l
Solubility in other solvents	not determined
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density (at 20 °C):	1,51 g/cm³
Relative density:	No data available
Bulk density:	~800 kg/m³
Relative vapour density:	not determined
Particle characteristics:	No data available

9.2. Other information**Information with regard to physical hazard classes****Explosive properties**

No data available

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

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Oxidizing properties
Not oxidising.

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	100%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	No data available
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

Corrosive to metals.

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

No data available

10.2. Chemical stability

Handle and store contents under inert gas. Protect from moisture.
Protect against: Air

10.3. Possibility of hazardous reactions

Oxidising agent, strong
Acid
Aluminium
Zinc

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Metal

10.6. Hazardous decomposition products

No known hazardous decomposition products.

Further information

No data available

SECTION 11: Toxicological information**11.1. Information on hazard classes****Toxicokinetics, metabolism and distribution**

No data available

Acute toxicity

Harmful if swallowed.

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

Pulmonary oedema

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.

Inhalation effect: Damage to the respiratory tract.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1310-66-3	Lithium hydroxide monohydrate				
	oral	LD50 mg/kg	363 Mouse	Spravochnik po Toksikologii i Gigieniche	Only data from review article available.
	dermal	LD50 mg/kg	> 2000 Rat	Study report (1994)	OECD Guideline 402
	inhalation (4 h) dust/mist	LC50 mg/l	> 6,15 Rat	Study report (1999)	EPA OPPTS 870.1300

Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye irritation: Causes serious eye damage.

Risk of serious damage to eyes.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

No data available

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards**Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

Other information

No data available

Further information

Dizziness

Gastrointestinal complaints

Vomiting

Cyanosis (blue coloured blood)

Dyspnoea

May cause damage to organs. (kidneys, thyroid gland, central nervous system)

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

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SECTION 12: Ecological information**12.1. Toxicity**

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
1310-66-3	Lithium hydroxide monohydrate					
	Acute fish toxicity	LC50	109 mg/l	96 h	Danio rerio	Study report (2010)
	Acute algae toxicity	ErC50 mg/l	41,62	72 h	Pseudokirchneriella subcapitata	Study report (2010)
	Fish toxicity	NOEC mg/l	17,35	34 d	Danio rerio	Study report (2012)
	Crustacea toxicity	NOEC	4 mg/l	21 d	Daphnia magna	Study report (2010)
	Acute bacteria toxicity	EC50 mg/l ()	180,8	3 h	activated sludge, domestic	Study report (2004)
						EU Method C.11

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of UK REACH.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not allow to enter into surface water or drains.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number or ID number:**

UN 2680

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14.2. UN proper shipping name:	LITHIUM HYDROXIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C6
Limited quantity:	1 kg
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E
Inland waterways transport (ADN)	
14.1. UN number or ID number:	UN 2680
14.2. UN proper shipping name:	LITHIUM HYDROXIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C6
Limited quantity:	1 kg
Excepted quantity:	E2
Marine transport (IMDG)	
14.1. UN number or ID number:	UN 2680
14.2. UN proper shipping name:	LITHIUM HYDROXIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Special Provisions:	-
Limited quantity:	1 kg
Excepted quantity:	E2
EmS:	F-A, S-B
Air transport (ICAO-TI/IATA-DGR)	
14.1. UN number or ID number:	UN 2680
14.2. UN proper shipping name:	LITHIUM HYDROXIDE
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Limited quantity Passenger:	5 kg
Passenger LQ:	Y844
Excepted quantity:	E2
IATA-packing instructions - Passenger:	859
IATA-max. quantity - Passenger:	15 kg
IATA-packing instructions - Cargo:	863
IATA-max. quantity - Cargo:	50 kg
14.5. Environmental hazards	
ENVIRONMENTALLY HAZARDOUS:	No
14.6. Special precautions for user	
Warning: strongly corrosive.	
14.7. Maritime transport in bulk according to IMO instruments	
not applicable	

SECTION 15: Regulatory information

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**EU regulatory information**

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 6,8,9,11,12.

Abbreviations and acronyms

Acute Tox. 4: Acute toxicity, hazard category 4

Skin Corr. 1B: Skin corrosion, sub-category 1B

Eye Dam. 1: Serious eye damage, hazard category 1

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Provide appropriate information, instructions and training to users