



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Product Name	Lithium Hydroxide Monohydrate 98%
Chemical Formula	LiOH · H ₂ O
Product code	GPC1899
CAS No.	1310-66-3
EC No.	Not applicable.
REACH Registration No.	Not known.

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

Identified Use(s)	PC21 Laboratory chemicals
Uses Advised Against	Not known.

1.3 Details of the supplier of the safety data sheet

Manufacturer	
Company Identification	Atom Scientific Ltd
Address of Manufacturer	Unit 2B East Tame Business Park Rexcine Way Hyde Cheshire
Postal code	SK14 4GX
Telephone:	0161 3665123
Fax	01704 337167
E-mail	technical@atomscientific.com
Office hours	08:00 - 17:00

Supplier	
Company Identification	Atom Scientific Ltd
Address of Supplier	Unit 2B East Tame Business Park Rexcine Way Hyde Cheshire
Postal code	SK14 4GX
Telephone:	0161 3665123
Fax	01704 337167
E-mail	technical@atomscientific.com
Office hours	08:00 - 17:00

1.4 Emergency telephone number

Emergency Phone No.	07833453806
Contact	Peter Keenan

SECTION 2: HAZARDS IDENTIFICATION



2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) Acute Tox. 4 :Harmful if swallowed.
Skin Corr. 1 :Causes severe skin burns and eye damage.

2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Product Name Lithium Hydroxide Monohydrate 98%

Hazard Pictogram(s)



GHS05



GHS07

Signal Word(s) Danger

Hazard Statement(s)
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.

Precautionary Statement(s)
P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing 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/doctor.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

2.4 Additional Information

For full text of H/P Statements see section 16.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / REACH Registration No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Lithium hydroxide (Li(OH)), monohydrate	1310-66-3	603-454-3	100.00	Acute Tox. 4 H302 Skin Corr. 1 H314	GHS05 GHS07



3.2 Mixtures

Not applicable.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Immediately call a POISON CENTER/doctor.
Skin Contact	Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER/doctor.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns.

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment (see Medical Advice on this label). Immediately call a POISON CENTER/doctor. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media	As appropriate for surrounding fire.
Unsuitable extinguishing media	None.

5.2 Special hazards arising from the substance or mixture

May decompose in a fire, giving off toxic and irritant vapours.

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid dust generation. Do not breathe dust. Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions

Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Sweep up spilled substance and remove to safe place. Use vacuum equipment for collecting spilt materials, where practicable.

6.4 Reference to other sections



See Also Section 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up.

Storage temperature

Ambient.

Storage life

Stable under normal conditions.

Incompatible materials

None known.

7.3 Specific end use(s)

PC21 Laboratory chemicals

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits No Occupational Exposure Limit assigned.

8.2 Exposure controls

8.2.1. Appropriate engineering controls Use with ventilation, local exhaust ventilation or breathing protection. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment



Eye Protection

Wear eye protection with side protection (EN166).



Skin protection

Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection

A suitable dust mask or dust respirator with filter type P (EN143 or EN405) may be appropriate.



Thermal hazards

None known.

8.2.3. Environmental Exposure Controls Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties



Appearance	Solid.
	Colour : White
Odour	Not known.
Odour threshold	Not known.
pH	12 at 0.4 g/l
Melting point/freezing point	Not known.
Initial boiling point and boiling range	100 °C at 1,013 hPa
Flash Point	Not applicable.
Evaporation rate	Not known.
Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Not known.
Vapour pressure	Not known.
Vapour density	Not known.
Density (g/ml)	Not known.
Relative density	1.510 g/cm ³
Solubility(ies)	Solubility (Water) : 216 g/l at 20 °C Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Not known.
Auto-ignition temperature	Not known.
Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Not known.
Oxidising properties	Not known.
9.2 Other information	None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

None anticipated.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid

None anticipated.

10.5 Incompatible materials

Strong oxidizing agents, Acids, Aluminum, Zinc

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION



11.1 Information on toxicological effects

Acute toxicity - Ingestion	Harmful if swallowed. LD50 Oral - Rat - female - 368 mg/kg
Acute toxicity - Skin Contact	Low acute toxicity
Acute toxicity - Inhalation	LC50 Inhalation - Rat - male and female - 4 h - > 6.15 mg/l
Skin corrosion/irritation	Causes severe skin burns and eye damage. Skin - in vitro assay Result: Corrosive
Serious eye damage/irritation	Non-irritant
Skin sensitization data	Not classified
Respiratory sensitization data	Not classified
Germ cell mutagenicity	Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Not mutagenic in Ames Test Mouse lymphocyte Result: negative
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	Lithium and its compounds are possible teratogens by analogy to lithium carbonate which has equivocal human teratogenic data and positive animal teratogenic data.
Lactation	Not classified
STOT - single exposure	Not classified
STOT - repeated exposure	Not classified
Aspiration hazard	Not classified
11.2 Other information	Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - ca. 33.5 mg/l - 48 h
Toxicity - Fish	static test LC50 - Danio rerio (zebra fish) - 109 mg/l - 96 h
Toxicity - Algae	static test EC50 - Pseudokirchneriella subcapitata (algae) - 41.62 mg/l - 72 h
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.
12.2 Persistence and Degradation	Not known.

**12.3 Bioaccumulative potential**

Not known.

12.4 Mobility in soil

Not known.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

12.6 Other adverse effects

Not known.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Dispose of contents in accordance with local, state or national legislation. Send to a licensed recycler, reclaimer or incinerator. Dispose of this material and its container to hazardous or special waste collection point.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION**14.1 UN number**

UN No. 2680

14.2 UN proper shipping name

UN proper shipping name LITHIUM HYDROXIDE

14.3 Transport hazard class(es)

ADR/RID

ADR/RID Class 8

ADR Classification Code C6

Special Provisions

Limited Quantities 1 kg

Excepted Quantities E2

Emergency Action Code 2X

Mixed Packing Instructions for Packages P002 IBC08

Special Packing Provisions for Packages B4

Mixed Packing Instructions for Packages MP10

Packing Instructions for Portable Tanks T3

Special Provisions for Portable Tanks TP33

Tank Code for Tanks SGAN

Special Provisions for Tanks

Vehicle for Tank Carriage AT

ADR Transport Category 2

Tunnel Restriction Code E

Special Provisions for Carriage - V11



Packages

Special Provisions for Carriage - Bulk

Special Provisions for Carriage - Loading,
Unloading and Handling

Special Provisions for Carriage -

Operation

ADR HIN 80

IMDG

IMDG Class 8

Special Provisions

Limited Quantities 1 kg

Excepted Quantities E2

Mixed Packing Instructions for Packages P002 IBC08

Special Packing Provisions for Packages B4

Packing Instructions for Portable Tanks T3

Special Provisions for Portable Tanks TP33

IMDG EMS F-A, S-B

Stowage and Handling Category A

Segregation SG35

Marine Pollutant

ICAO/IATA

IATA Proper Shipping Name LITHIUM HYDROXIDE

Excepted Quantities E2

Passenger and Cargo Aircraft Limited Y844

Quantities Packing Instructions

Passenger and Cargo Aircraft Limited 5Kg

Quantities Max net Qty

Passenger and Cargo Aircraft Packing 859

Instructions

Passenger and Cargo Aircraft Max net 15Kg

Qty

Cargo Aircraft Packing Instructions 863

Cargo Aircraft Max net Qty 50Kg

Special Provisions

Emergency Response Guidebook (ERG) 8L

Code

Labels

Labels 8



14.4 Packing group

Packing group II



14.5 Environmental hazards

Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user

Special precautions for user Not known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available

SECTION 15: REGULATORY INFORMATION

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

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very High Concern for Authorisation Not listed

REACH: ANNEX XIV list of substances subject to authorisation Not listed

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not listed

Community Rolling Action Plan (CoRAP) Not listed

Regulation (EC) N° 850/2004 of the European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Not listed

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Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Not listed

National regulations

Other Not known.

15.2 Chemical Safety Assessment

A REACH chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

Hazard Pictogram(s)



GHS05



GHS07



Hazard classification	Acute Tox. 4 : Acute toxicity, Category 4 Skin Corr. 1 : Skin corrosion/irritation, Category 1
Hazard Statement(s)	H302: Harmful if swallowed. H314: Causes severe skin burns and eye damage.
Precautionary Statement(s)	P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264: Wash hands and exposed skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. 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. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. P321: Specific treatment (see Medical Advice on this label). P330: Rinse mouth. P363: Wash contaminated clothing before reuse. P405: Store locked up. P501: Dispose of contents in accordance with local, state or national legislation.
Acronyms	ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road CAS : Chemical Abstracts Service CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures DNEL : Derived No Effect Level EC : European Community EINECS : European Inventory of Existing Commercial Chemical Substances IATA : International Air Transport Association IBC : Intermediate Bulk Container ICAO : International Civil Aviation Organization IMDG : International Maritime Dangerous Goods



LTEL : Long term exposure limit
PBT : Persistent, Bioaccumulative and Toxic
PNEC : Predicted No Effect Concentration
REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
RID : Regulations concerning the International Carriage of Dangerous Goods by Rail
STEL : Short term exposure limit
STOT : Specific Target Organ Toxicity
UN : United Nations
vPvB : very Persistent and very Bioaccumulative

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