

Revision: 1.2

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Section 1. Identification

1.1 Product Identifier

1206

Product Name LITHIUM HYDROXIDE H2O pure

CAS Number 1310-66-3

REACH Registration No 01-2119560576-31-XXXX

Molecular Formula $\text{LiOH}\cdot\text{H}_2\text{O} = 41.96$

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

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier

Vickers Laboratories Ltd



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1.4 Emergency Telephone

(08:00-16:30) +44(0) 113 2362811

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(Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Skin corrosion/irritation, category 1A

Acute toxicity, category 4 (oral)

H314: Causes severe skin burns and eye damage.

H302: Harmful if swallowed.

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary Statements Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves / protective clothing / eye protection / face protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Lithium hydroxide.H2O	1310-66-3	215-183-4	01-2119560576-31-XXXX	~99%	Skin Corr. 1A,Acute Tox. 4 (O)

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. If irritation persists or there is any sign of skin damage, seek IMMEDIATE MEDICAL ASSISTANCE
Inhalation	Remove from exposure.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

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

No further relevant information available.

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

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Consider what other flammable materials are present and act accordingly.
Unsuitable Media	Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards	Presents no specific fire danger.
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5.3 Advice for firefighters

Advice for firefighters	Consider all other materials in the vicinity.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Avoid breathing dust. Use approved personal protective equipment. Evacuate area immediately. Do not allow other people to enter area. Do not allow general use of area until it is safe to do so.
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6.2 Environmental precautions

Environmental	Keep non-neutralised material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
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6.3 Methods and material for containment and cleaning up

Major Spillage	Contain spill with inert material. Neutralise with 5M hydrochloric acid. Wash area down with copious amounts of water.
Minor Spillage	Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains dust concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place protected against moisture and water. Keep well separated from acids, metals, explosives, organic peroxides and ignitable materials.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits	
			Long Term (8hr TWA)	Short Term 15min period)
Lithium hydroxide.H2O	1310-66-3	~99%	-	-

Exposure data source(s) No occupational exposure data currently available.

8.2 Exposure controls

Respiratory Protection	If process creates significant amounts of dust use L.E.V. or wear suitable dust mask.
Hand Protection	Use nitrile gloves or PVC gauntlets.
Eye Protection	Use chemical full face shield.
Skin Protection	If skin contact or contamination of clothing is likely, protective clothing must be worn. Wear PVC oversuit.
Special Hazards	No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	White hygroscopic crystalline solid
Odour	No specific odour.
pH	12 @ 0.4g/l @ 20°C
Boiling Point	Not available
Melting Point	462°C
Flash Point	Not applicable
Upper Flammable Limit	Not applicable
Lower Flammable Limit	Not applicable
Auto Ignition	Not applicable
Explosive Properties	No.
Oxidising Properties	No.
Vapour Pressure	Not applicable
Relative Density	1.510 @20°C
Water Solubility	Moderately soluble in water.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1	Reactivity	No data available.
10.2	Chemical Stability	Stable under normal conditions
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to Avoid	No specific conditions.
10.5	Incompatible Materials	Acids. Warm ammoniacal silver nitrate. Nitrobenzene. Sodium tetrahydroborate. Reacts with aluminium and zinc to produce extremely flammable hydrogen gas. Bromine. Chloroform and methanol.
10.6	Hazardous Decomposition Products	None unusual.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	The solid and solutions will cause severe burns. Damage can range from severe irritation and corneal scarring to permanent blindness.
Skin	Contact with the solid or solution will not lead to immediate pain but damage begins at once. Severe ulceration and scarring may occur in serious cases.
LD50 Skin	Not available
Ingestion	Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus.
LD50 Oral	368mg/kg Rat
Inhalation	Prolonged exposure to dust or fume concentrations above the occupational exposure limits will produce severe irritation of the eyes, nose, throat and respiratory tract.
LD50 Inhalation	>6.15mg/l Rat
TCLo	Not available
Carcinogenicity	Has been implicated as a possible cause of cancer of the oesophagus after very prolonged exposure. Carcinogenesis in these cases may be due to tissue destruction and scar formation.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	Some studies of pregnant mice and rats were associated with birth defects but only at doses large administered to rats but no major malformations.
Other Information	The irritant effect provides warning that control of exposure is needed.

Section 12. Ecological

12.1	Toxicity	Small amounts present no specific environmental hazard. Neutralised material presents no specific environmental hazard.
	LC50 Algal	Not available
	LC50 Crustacea	41.62mg/l Daphnia magna (72 hours)
	LC50 Fish	109mg/l Fish (96 hours)
12.2	Persistence and degradability	No data available.
12.3	Bioaccumulative potential	No data available.
12.4	Mobility in soil	No data available.
12.5	Results of PBT & vPvB assessment	Assessment not required.
12.6	Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dilute in a large excess of water and carefully neutralise with an acid, then wash to drain with copious amounts of water
Contaminated Packaging	Very carefully wash out containers with water. Use a licensed waste disposer.

Section 14. Transport Information

14.1 UN Number	2680
14.2 Proper Shipping Name	Lithium hydroxide
14.3 Transport classes	
UN classification	8
Subsidiary hazard(s)	None
Transport category	2
ADR Hazard ID	80
Tunnel Restriction Code	E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Skin corrosion/irritation, category 1A; Acute toxicity, category 4 (oral)

Signal word Danger

Hazard Pictograms



Hazard Statements H302, H314
Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary Statements P264, P270, P280, P301+P330+P331, P303+P361+P353, P305+P351+P338
Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves / protective clothing / eye protection / face protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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