

**SAFETY DATA SHEET**  
Hydrated Lime

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Issued: 06/02/2026  
Revision No: 3

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

**PRODUCT NAME:** Calcium Dihydroxide

**OTHER MEANS OF IDENTIFICATION:** Hydrated lime, Slaked lime, Air slaked lime, Building lime, Fat lime, Chemical lime, Finishing lime, Mason's lime, Calcium dihydroxide, Calcium hydroxide, Calcium hydrate, Lime, Lime water.

Please note that this list may not be exhaustive.

**CAS No.:** 1305-62-0

**EC No.:** 215-137-3

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

**Identified uses:** Building and construction work; Manufacture of chemical products; Manufacture of basic metals, including alloys; Agriculture, forestry, fishery; Biocidal product; Environmental protection; Food/ feedstuff additives; Manufacture of food products; Pharmaceuticals; Manufacture of other non-metallic mineral products, e.g. plasters, cement Paper articles; Manufacture of paints, varnishes and similar coatings, printing ink and mastics; Stone, plaster, cement, glass and ceramic articles; Mining, (including offshore industries); Water treatment chemicals.

**Uses advised against:** Not determined.

**Details of the supplier of the safety data sheet:**

**Company name:** Nexchem Ltd  
Unit 3 Barshaw Park  
Leycroft Road  
Leicester  
LE4 1ET  
Tel: 0116 2311130  
24/7 Emergency Tel: 0800 246 1274  
Email: [sales@nexchem.co.uk](mailto:sales@nexchem.co.uk)

**2. HAZARDS IDENTIFICATION**

**Classification of the substance or mixture:**

Skin Irrit.2, H315, Exposure: Dermal  
Eye Dam.1, H318,  
STOT SE3, H335, Exposure: Inhalation

**Further information:** For the full text of the H-Statements mentioned in this Section, see Section 16.

**Label elements:**



Danger

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<b>Hazard statements:</b>	H315: Causes skin irritation. H318: Causes serious eye damage. H335: May cause respiratory irritation.
<b>Precautionary statements:</b>	P102: Keep out of reach of children. P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P280: Wear protective gloves/ protective clothing/ eye protection/ face protection. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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. P501: Dispose of contents/container in accordance with local regulation.
<b>Other hazards:</b>	The substance does not meet the criteria for PBT or vPvB substance. No other hazards identified.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Substances:

Chemical name	Index No.	CAS No.	EC No.	REACH reg No.	Conc. (%w/w)
Calcium Dihydroxide	-	1305-62-0	215-137-3	01-2119475151-45	<100

Degree of purity (%): No impurities relevant for classification and labelling.

### 4. FIRST AID MEASURES

#### Description of first aid measures:

<b>General advice:</b>	No known delayed effects. Consult a physician for all exposures except for minor instances.
<b>Inhalation:</b>	Move source of dust or move person to fresh air. Obtain medical attention immediately.
<b>Eye contact:</b>	Rinse immediately with plenty of water and seek medical advice.
<b>Skin contact:</b>	Carefully and gently brush the contaminated body surfaces in order to remove all traces of product. Wash affected area immediately with plenty of water. Remove contaminated clothing. If skin irritation persists, call a physician.
<b>Ingestion:</b>	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Obtain medical attention.

#### Most important symptoms and effects, both acute and delayed:

The substance is not acutely toxic via the oral, dermal, or inhalation route. The substance is classified as irritating to skin and the respiratory tract and entails a risk of serious damage to the eye. There is no concern for adverse systemic effects because local effects (pH-effect) are the major health hazard.

**Indication of any immediate medical attention and special treatment needed:** Follow the advice given in section 4.1.

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### 5. FIRE-FIGHTING MEASURES

#### Extinguishing media:

**Suitable extinguishing media:** The product is not combustible. Use a dry powder, foam or CO<sub>2</sub> fire extinguisher to extinguish the surrounding fire. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:** DO NOT use water.

#### Special hazards arising from the substance or mixture:

When heated above 580°C, calcium dihydroxide decomposes to produce calcium oxide (CaO) and water (H<sub>2</sub>O):  $\text{Ca(OH)}_2 \rightarrow \text{CaO} + \text{H}_2\text{O}$ .

#### Advice for firefighters:

Avoid dust formation.

Use breathing apparatus.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures:

**For non-emergency personnel:** Ensure adequate ventilation.  
Keep dust levels to a minimum.  
Keep unprotected persons away.  
Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8). Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).

**For emergency responders:** See section 6.1.1

**Environmental precautions:** Contain the spillage. Keep the material dry if possible. Cover area, if possible, to avoid unnecessary dust hazard. Avoid uncontrolled spills to watercourses and drains (pH rising). Any large spillage into watercourses must be alerted to the Environment Agency or other regulatory body.

#### Methods and material for containment and cleaning up:

Avoid dust formation.

Keep the material dry if possible.

Pick up the product mechanically in a dry way.

Use vacuum suction unit or shovel into bags.

**Reference to other sections:** For more information on exposure controls/personal protection or disposal considerations, please check section 8 and 13

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### 7. HANDLING AND STORAGE

#### Precautions for safe handling:

##### Protective measures:

Avoid contact with skin and eyes.

For personal protection see section 8.

Keep dust levels to a minimum. Minimise dust generation. Enclose dust sources, use exhaust ventilation (dust collector at handling points).

Handling systems should preferably be enclosed. When handling bags usual precautions should be paid to the risks outlined in the Council Directive 90/269/EEC.

##### Advice on general occupational hygiene:

Avoid inhalation, ingestion and contact with skin and eyes.

General occupational hygiene measures are required to ensure safe handling of the substance.

These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.

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

Store in a dry place.

Minimise exposure to air and moisture to avoid degradation.

Bulk storage should be in purpose designed silos.

Keep out of the reach of children.

Keep away from acids, significant quantities of paper, straw and nitro compounds.

DO NOT use aluminium for transport and storage if there is a risk of contact with water.

##### Specific end use(s):

Information on specific exposure scenarios available on request.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Control parameters:

##### Occupational exposure limit:

Chemical name	Form	Limit value	Legal basis
Calcium di-hydroxide	Time weighted average (8h) Total inhalable dust STEL 15 min Respirable dust 8h TWA Respirable dust	5 mg/m <sup>3</sup> 4 mg/m <sup>3</sup> 1 mg/m <sup>3</sup>	EH40/2005 Workplace Exposure Limits Directive EU 2017/164 Directive EU 2017/164

##### Derived No Effect Level:

##### Workers:

Chemical name	Exposure routes	Acute local effects	Acute systematic effects	Long-term local effects	Long-term systematic effects
Calcium di-hydroxide	Oral	Not required	Not required	Not required	Not required
	Inhalation	4 mg/m <sup>3</sup> respirable dust	No hazard identified	1 mg/m <sup>3</sup> respirable dust	No hazard identified
	Dermal	No exposure expected	No hazard identified	No exposure expected	No hazard identified

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#### Consumers:

Chemical name	Exposure routes	Acute local effects	Acute systematic effects	Long-term local effects	Long-term systematic effects
Calcium di-hydroxide	Oral	No exposure expected	No exposure expected	No exposure expected	No exposure expected
	Inhalation	4 mg/m <sup>3</sup> respirable dust	No hazard identified	1 mg/m <sup>3</sup> respirable dust	No hazard identified
	Dermal	No exposure expected	No exposure expected	No exposure expected	No hazard identified

Calcium di-hydroxide	Environmental protection target							
	Fresh water	Fresh water	Marine water	Marine sediment	Food chain	Microorganisms	Soil	Air
	0.49 mg/l	No data available	0.32 mg/l	No data available	Does not bioaccumulate	3 mg/l	1.08 mg/kg soil dw	No hazard identified

**Exposure controls:** To control potential exposures, generation of dust should be avoided. Further, appropriate protective equipment is recommended. Eye protection equipment (e.g. goggles or visors) must be worn, unless potential contact with the eye can be excluded by the nature and type of application (i.e. closed process). Additionally, face protection, protective clothing and safety shoes are required to be worn as appropriate.

**Appropriate engineering controls:** Handling systems should preferably be enclosed, or suitable ventilation installed to maintain atmospheric dust below the OES, if not wear suitable protective equipment.

#### Individual protection measures, such as personal protective equipment:

**Eye/face protection:** Do not wear contact lenses. For powders, tight fitting goggles with side shields, or wide vision full goggles. It is also advisable to have individual pocket eyewash.

**Skin protection:** Use approved nitrile impregnated gloves having CE marks. Use clothing fully covering skin, full length pants, long sleeved overalls, with close fittings at openings. Footwear resistant to caustics and avoiding dust penetration.

**Respiratory protection:** Local ventilation to keep levels below established threshold values is recommended. A suitable particle filter mask is recommended, depending on the expected exposure levels.

**Thermal hazards:** The substance does not represent a thermal hazard, thus special consideration is not required.

**Environmental exposure controls:** All ventilation systems should be filtered before discharge to atmosphere. Contain the spillage. Keep the material dry if possible. Cover area, if possible, to avoid unnecessary dust hazard. Avoid uncontrolled spills to watercourses and drains (pH rising). Any large spillage into watercourses must be alerted to the Environment Agency or other regulatory body.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties:

<b>Appearance:</b>	Colour: white, off-white, beige Form: fine powder
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not applicable
<b>pH:</b>	12,4; 20°C; saturated solution
<b>Melting point:</b>	> 450°C; study result, EU A.1 method
<b>Boiling point:</b>	Not applicable (solid with a melting point > 450°C)
<b>Flash point:</b>	Not applicable (solid with a melting point > 450°C)
<b>Evaporation rate:</b>	Not applicable (solid with a melting point > 450°C)
<b>Flammability:</b>	The product is not flammable.; study result, EU A.10 method Lower flammability limit: No data available Upper flammability limit: No data available
<b>Explosive properties:</b>	Non-explosive (void of any chemical structures commonly associated with explosive properties). Upper/Lower explosion limit: Lower: No data available Upper: No data available
<b>Vapour pressure:</b>	Not applicable (solid with a melting point > 450°C)
<b>Vapour density:</b>	Not applicable
<b>Relative density:</b>	2,24 g/cm <sup>3</sup> ; study result, EU A.3 method
<b>Bulk density:</b>	200 - 800 kg/m <sup>3</sup> ; 20°C
<b>Solubility(ies):</b>	1.844,9 mg/l; 20 °C; study result, EU A.6 method
<b>Partition coefficient: n-octanol/water:</b>	Not applicable (inorganic substance)
<b>Auto-ignition temperature:</b>	No relative self-ignition temperature below 400°C (study result, EU A.16 method)
<b>Decomposition temperature:</b>	When heated above 580°C, calcium dihydroxide decomposes to produce calcium oxide (CaO) and water (H <sub>2</sub> O): $\text{Ca(OH)}_2 \rightarrow \text{CaO} + \text{H}_2\text{O}$ .
<b>Viscosity, kinematic:</b>	Not applicable (solid with a melting point > 450°C)
<b>Oxidising properties:</b>	No oxidising properties. (Based on the chemical structure, the substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermally with combustible material).
<b>Other information:</b>	No data available

### 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	In aqueous media Ca(OH) <sub>2</sub> dissociates resulting in the formation of calcium cations and hydroxyl anions (when below the limit of water solubility).
<b>Chemical stability:</b>	Under normal conditions of use and storage (dry conditions), the product is stable.
<b>Possibility of hazardous reactions:</b>	The product reacts exothermally with acids. When heated above 580°C, calcium dihydroxide decomposes to produce calcium oxide (CaO) and water (H <sub>2</sub> O): $\text{Ca(OH)}_2 \rightarrow \text{CaO} + \text{H}_2\text{O}$ . Calcium oxide reacts with water and generates heat. This may cause risk to flammable material.

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- Conditions to avoid:** For information on conditions to avoid, please see section 7.
- Incompatible materials:** The product reacts exothermically with acids to form salts. Reacts with aluminium and brass in the presence of moisture leading to the production of hydrogen.  $\text{Ca(OH)}_2 + 2 \text{Al} + 6 \text{H}_2\text{O} \rightarrow \text{Ca(Al(OH)}_4)_2 + 3 \text{H}_2$
- Hazardous decomposition products:** For hazardous decomposition products resulting from heat, please see section 5.
- Further information:** Calcium dihydroxide reacts with carbon dioxide to form calcium carbonate, which is a common material in nature.

### 11. TOXICOLOGICAL INFORMATION

#### Information on toxicological effects:

##### Acute toxicity:

Calcium dihydroxide is not acutely toxic.

**Oral:** LD50 > 2000 mg/kg bw (OECD 425, rat)

**Dermal:** LD50 > 2500 mg/kg bw (OECD 402, rabbit)

**Inhalation:** No data available

Classification for acute toxicity is not warranted.

##### Skin corrosion/irritation:

Calcium dihydroxide is irritating to skin (OECD 404, in vivo, rabbit).

Based on experimental results, calcium dihydroxide requires classification as irritating to skin [Skin Irrit 2 (H315 – Causes skin irritation)].

**Serious eye damage/eye irritation:** Calcium dihydroxide entails a risk of serious damage to the eye (eye irritation studies (in vivo, rabbit)).

Based on experimental results, calcium dihydroxide requires classification as severely irritating to the eye [Eye Damage 1 (H318 - Causes serious eye damage)].

**Respiratory or skin sensitisation:** No data available.

The product is considered not to be a skin sensitiser, based on the nature of the effect (pH shift) and the essential requirement of calcium for human nutrition. Classification for sensitisation is not warranted.

##### Germ cell mutagenicity:

Bacterial reverse mutation assay (Ames test, OECD 471): Negative

Mammalian chromosome aberration test: Negative

In view of the omnipresence and essentiality of Ca and of the physiological non-relevance of any pH shift induced by the product in aqueous media, the product is obviously void of any genotoxic potential, including germ cell mutagenicity. Classification for genotoxicity is not warranted.

##### Carcinogenicity:

Calcium (administered as Ca-lactate) is not carcinogenic (experimental result, rat). The pH effect of the product does not give rise to a carcinogenic risk. Human epidemiological data support lack of any carcinogenic potential of the product. Classification for carcinogenicity is not warranted.

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- Reproductive toxicity:** Calcium (administered as Ca-carbonate) is not toxic to reproduction (experimental result, mouse). The pH effect does not give rise to a reproductive risk.  
Human epidemiological data support lack of any potential for reproductive toxicity of the product. Both in animal studies and human clinical studies on various calcium salts no reproductive or developmental effects were detected. Also see the Scientific Committee on Food (Section 16.6). Thus, the product is not toxic for reproduction and/or development. Classification for reproductive toxicity according to regulation (EC) 1272/2008 is not required.
- STOT - single exposure:** From human data it is concluded that Ca(OH)<sub>2</sub> is irritating to the respiratory tract. As summarised and evaluated in the SCOEL recommendation (Anonymous, 2008), based on human data calcium dihydroxide is classified as irritating to the respiratory system [STOT SE 3 (H335 – May cause respiratory irritation)].
- STOT - repeated exposure:** Toxicity of calcium via the oral route is addressed by upper intake levels (UL) for adults determined by the Scientific Committee on Food (SCF), being UL = 2500 mg/d, corresponding to 36 mg/kg bw/d (70 kg person) for calcium.  
Toxicity of the product via the dermal route is not considered as relevant in view of the anticipated insignificant absorption through skin and due to local irritation as the primary health effect (pH shift).  
Toxicity of the product via inhalation (local effect, irritation of mucous membranes) is addressed by an 8-h TWA determined by the Scientific Committee on Occupational Exposure Limits (SCOEL) of 1 mg/m<sup>3</sup> respirable dust (see section 8.1).  
Therefore, classification of the product for toxicity upon prolonged exposure is not required.
- Aspiration hazard:** The product is not known to present an aspiration hazard.

## 12. ECOLOGICAL INFORMATION

### Toxicity:

- Toxicity to fish:** LC50 (96h) for freshwater fish: 50.6 mg/l (calcium dihydroxide)  
LC50 (96h) for marine water fish: 457 mg/l (calcium dihydroxide)
- Toxicity to aquatic invertebrates:** EC50 (48h) for freshwater invertebrates: 49.1 mg/l (calcium dihydroxide)  
LC50 (96h) for marine water invertebrates: 158 mg/l (calcium dihydroxide)
- Toxicity to aquatic plants:** EC50 (72h) for freshwater algae: 184.57 mg/l (calcium dihydroxide)  
NOEC (72h) for freshwater algae: 48 mg/l (calcium dihydroxide)
- Toxicity to microorganisms/Toxicity to bacteria:** At high concentration, through the rise of pH, the product is used for disinfection of sewage sludges.
- Toxicity to daphnia and other aquatic invertebrates:** NOEC (14d) for marine water invertebrates: 32mg/l (calcium dihydroxide)
- Toxicity to soil dwelling organisms:** EC10/LC10 or NOEC for soil microorganisms: 2000 mg/kg soil dw (calcium dihydroxide)  
EC10/LC10 or NOEC for soil microorganisms: 12000 mg/kg soil dw (calcium dihydroxide)
- Toxicity to terrestrial plants:** NOEC (21d) for terrestrial plants: 1080 mg/kg (calcium dihydroxide)
- Other effects:** Acute pH-effect. Although this product is useful to correct water acidity, an excess of more than 1 g/l may be harmful to aquatic life. pH-value of > 12 will rapidly decrease as result of dilution and carbonation.

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<b>Other information:</b>	None
<b>Persistence and degradability:</b>	Not relevant for inorganic substances.
<b>Bioaccumulative potential:</b>	Not relevant for inorganic substances.
<b>Mobility in soil:</b>	Calcium dihydroxide, which is sparingly soluble, presents a low mobility in most soils.
<b>Results of PBT and vPvB assessment:</b>	Not relevant for inorganic substances.
<b>Other adverse effects:</b>	No other adverse effects are identified.

### 13. DISPOSAL CONSIDERATIONS

<b>Waste treatment methods:</b>	Reuse or recycle whenever possible. If the reuse or recycling is not possible, disposal must be made according to local and national regulation. Processing, use or contamination of this product may change the waste management options. Waste classification code must be determined at the point of waste generation. Dispose of container and unused contents in accordance with applicable member state and local requirements. The used packaging is only meant for packing this product; it should not be reused for other purposes. If the used packaging contains more than 3 % of the lime product, it must be considered as hazardous.
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### 14. TRANSPORT INFORMATION

The product is not classified as hazardous for transport (ADR (Road), RID (Rail), IMDG/GGV Sea (Sea)).

<b>UN number:</b>	Not regulated
<b>UN proper shipping name:</b>	Not regulated
<b>Environmental hazards:</b>	None
<b>Special precautions for user:</b>	Avoid any release of dust during transportation, by using air-tight tanks
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</b>	Not regulated

### 15. REGULATORY INFORMATION

**Chemical safety assessment:** A Chemical Safety Assessment has been carried out for this substance.

**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.

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**16. OTHER INFORMATION**

<b>Hazard statements:</b>	H315: Causes skin irritation. H318: Causes serious eye damage. H335: May cause respiratory irritation.
<b>Precautionary statements:</b>	P102: Keep out of reach of children. P280: Wear protective gloves/ protective clothing/ eye protection/ face 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. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P310: Immediately call a POISON CENTER/doctor. P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P501: Dispose of contents/container in accordance with local regulation.
<b>Abbreviations:</b>	DNEL: Derived no effect level EC50: median effective concentration LC50: median lethal concentration LD50: median lethal dose NOEC: no observable effect concentration OEL: occupational exposure limit PBT: persistent, bioaccumulative, toxic chemical PNEC: predicted no-effect concentration SDS: Safety data sheet STEL: short-term exposure limit STOT: specific target organ toxicity TWA: time weighted average vPvB: very persistent, very bioaccumulative chemical
<b>Legal disclaimer:</b>	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.