

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Name	: Hydrated Lime
EC-No.	: 215-137-3
CAS-No.	: 1305-62-0
Formula	: Ca(OH) ₂

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

1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use
Use of the substance/mixture	: Building chemical additive Chemical raw material Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

Emergency number : +90 262 310 5000

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

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

Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes skin irritation. Causes serious eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

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Precautionary statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P312 - Call a POISON CENTRE or doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : Hydrated Lime
IUPAC name : Calcium dihydroxide
Chemical name : Calcium hydroxide

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Calcium hydroxide	CAS-No.: 1305-62-0 EC-No.: 215-137-3	100	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

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

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately. In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. At least 20 min. wash with water. It is suitable to wash with 1% boric acid solution. Remove small particles from the eye with a cotton swab without damaging the eye.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person. If the victim is conscious, give a little water or milk. NEVER give an unconscious person anything to ingest. Seek immediate medical attention.

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

Symptoms/effects after inhalation : Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Possible inflammation of the respiratory tract. Affection of the nasal septum. May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Serious damage to eyes.
Chronic symptoms : Skin rash/inflammation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire. Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Contact with combustible material may cause fire.
Explosion hazard : Risk of explosion if heated under confinement.
Hazardous decomposition products in case of fire : On heating or during combustion : Toxic fumes may be released.

5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions : Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting : Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Keep public away from danger area.

6.1.1. For non-emergency personnel

- Protective equipment : Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137). Dust cloud production: dust-tight suit (EN 13982).
Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. On contact with moisture/water: keep upwind. On contact with moisture/water: consider evacuation. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Equip cleanup crew with proper protection. Stop leak if safe to do so. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Take account of toxic/corrosive precipitation water.

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Methods for cleaning up : Solid spill: cover with dry sand/earth. Collect the spill only if it is in a dry state in closing drums. Carefully collect the spill/leftovers. Leftovers: neutralize with acid solution. Wash away neutralized product with plentiful water. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep only in the original container in a cool well ventilated place. Store in a dry place. Store in a closed container.
Incompatible products : Strong acids. Strong bases. Strong oxidizing agents.
Incompatible materials : Extremely high or low temperatures.
Maximum storage period : 3 months In dry, non-humid and air-free indoor places
Heat and ignition sources : Keep away from heat and direct sunlight. Keep away from sources of ignition.
Information on mixed storage : Keep away from food, drink and animal feeding stuffs.
Storage area : Store, if possible, in a cool, well ventilated place away from incompatible materials.
Special rules on packaging : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials : SUITABLE MATERIAL: stainless steel. lead. nickel. MATERIAL TO AVOID: aluminium.

7.3. Specific end use(s)

See Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Calcium hydroxide (1305-62-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Calcium dihydroxide
IOEL TWA	1 mg/m ³ (Respirable fraction)
IOEL STEL	4 mg/m ³ (Respirable fraction)
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

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8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Corrosionproof clothing. Dust/aerosol mask with filter type P1. In case of dust production: protective goggles. Gloves. Safety glasses. Wear protective clothing. Wear foot protection. Gas mask.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Face shield (EN 166). In case of dust production: protective goggles (EN 166)

Eye protection			
Type	Field of application	Characteristics	Standard
Face shield	Dust	With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:

Protective clothing (EN 14605 or EN 13034). In case of dust production: head/neck protection. In case of dust production: dustproof clothing (EN 13982)

Hand protection:

Protective gloves against chemicals (EN 374)

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Chemical resistant gloves (according to European standard NF EN 374 or equivalent)	Natural rubber, Butyl rubber, Neoprene rubber (HNBR), Polyvinylchloride (PVC), Polyethylene/ethylenevinyl alcohol, VITON gloves				EN 374-3, EN 374-2, EN ISO 374-1, EN ISO 374

Other skin protection

Materials for protective clothing:

Excellent resistance: Natural rubber. neoprene (chloroprene rubber). Nitrile rubber. Good resistance: Butyl rubber. Polyvinylchloride (PVC)

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

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8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: No data available.
Appearance	: Powder.
Odour	: No data available.
Odour threshold	: Not available
Melting point	: 580 °C
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive properties	: Not explosive.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: 12.5 @25°C - saturated solution
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 2.2 g/cm ³
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Bulk density : 0.2 – 0.8 g/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

In aqueous media Ca(OH)₂ dissociates resulting in the formation of calcium cations and hydroxyl anions (when below the limit of water solubility).

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

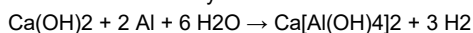
When heated above 580°C, calcium hydroxide decomposes to produce calcium oxide (CaO) and water (H₂O): $\text{Ca(OH)}_2 \rightarrow \text{CaO} + \text{H}_2\text{O}$.

10.4. Conditions to avoid

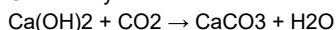
Minimise exposure to air and moisture to avoid degradation.

10.5. Incompatible materials

Reacts exothermically with acids to form salts. Reacts with aluminium and brass in the presence of moisture leading to the production of hydrogen:



Calcium hydroxide reacts with carbon dioxide to form Calcium carbonate, which is a common material in nature:



10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Calcium hydroxide (1305-62-0)

LD50 oral rat	7340 mg/kg bodyweight
Skin corrosion/irritation	: Causes severe skin burns. pH: 12.5 @25°C - saturated solution
Serious eye damage/irritation	: Causes serious eye damage. pH: 12.5 @25°C - saturated solution
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

Hydrated Lime (1305-62-0)

Viscosity, kinematic	Not applicable
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)
Not rapidly degradable	

Calcium hydroxide (1305-62-0)

LC50 - Fish [1]	4630 mg/l - Pimephales promelas
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Calcium hydroxide (1305-62-0)

EC50 72h - Algae [1]	> 4000 mg/l - Pseudokirchneriella subcapitata (Raphidocelis subcapitata, Selenastrum capricornutum)
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12.2. Persistence and degradability

Calcium hydroxide (1305-62-0)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Calcium hydroxide (1305-62-0)

Bioaccumulative potential	Not bioaccumulative.
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12.4. Mobility in soil

Calcium hydroxide (1305-62-0)

Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment

Calcium hydroxide (1305-62-0)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Completely empty the packaging prior to decontamination. Recycle the material as far as possible. Comply with local regulations for disposal.
Ecology - waste materials	: Avoid release to the environment. If it is diluted with plenty of water, it can be thrown into the sewer in small quantities.
European List of Waste (LoW) code	: 15 01 10* - packaging containing residues of or contaminated by dangerous substances 06 02 01* - calcium hydroxide

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

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ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Hydrated Lime is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

Hydrated Lime is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Hydrated Lime is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Hydrated Lime is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

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Ozone Regulation (1005/2009)

Hydrated Lime is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and 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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

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Abbreviations and acronyms:	
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
IOELV	Indicative Occupational Exposure Limit Value
Pow (log)	n-octanol/water partition coefficient
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
WGK	Water Hazard Class

Data sources : ECHA (European Chemicals Agency). Supplier's safety documents. Classification according to Regulation (EC) No. 1272/2008 [CLP].

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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