Calcium hydroxide v.p.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 3/17/2023 Version: 1.1

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Calcium hydroxide v.p.
EC-No.	:	215-137-3
CAS-No.	:	1305-62-0
REACH registration No.	:	01-2119822534-42
Product code	:	CL00.0321
Type of product	:	Pure substance
Formula	:	Ca(OH)2
Synonyms	:	agricultural lime / B754 / bell mine / biocalc / calcium dihydroxide / calcium hydrate / calcium hydroxide (Ca(OH)2) / calcium hydroxide, not obtained from the product of calcining natural materials / calvit / calvital / carboxide / caustic lime / E526 / hydrate lime / hydrated lime / kalkhydrate / kemikal / lime hydrate / lime milk / lime water / lime, agricultural / lime, slaked / milk of lime / primer SC part 3 / slaked lime / supercalco
BIG No	:	12831

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Chem-Lab nv
Industriezone 'De arend 2'
Zedelgem – Belgium
Belgium
T +32 50 288320
info@chem-lab.be - https://www.chem-lab.be

1.4. Emergency telephone number

Emergency number : +32 50 28 83 20

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 1	H318
Skin corrosion/irritation, Category 2	H315
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

No additional information available

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

Precautionary statements (CLP) : P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P313 - Get medical advice/attention.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P260 - Do not breathe dusts or mists.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Calcium hydroxide v.p.	CAS-No.: 1305-62-0 EC-No.: 215-137-3 REACH-no: 01-2119822534-42	100	Eye Dam. 1, H318 Skin Irrit. 2, H315 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 : Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

First-aid measures after inhalation : Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

First-aid measures after skin contact : If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a doctor/medical service.

First-aid measures after ingestion : Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties. Coughing.

Symptoms/effects after skin contact	:	Red skin. Tingling/irritation of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Caustic burns/corrosion of the skin. Blisters.
Symptoms/effects after eye contact	:	Corrosion of the eye tissue.
Symptoms/effects after ingestion	:	Nausea. Vomiting. Abdominal pain. Diarrhoea. Burns to the gastric/intestinal mucosa.
Chronic symptoms	:	Skin rash/inflammation.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Adapt extinguishing media to the environment for surrounding fires.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	:	DIRECT EXPLOSION HAZARD: No direct explosion hazard. INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Advice for firefighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	:	No specific fire-fighting instructions required.
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

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).
Emergency procedures	:	Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. 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

No additional information available

6.2. Environmental precautions

No additional information available

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.
Methods for cleaning up	:	Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Small quantities of liquid spill: neutralize with acid solution. Wash away neutralized product with plentiful water. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from naked flames/heat. Avoid raising dust. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Keep container tightly closed. Use corrosionproof equipment.

Hygiene measures : Observe strict hygiene.

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature : > 5 °C

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: organic materials. (strong) acids. amines. water/moisture.

Storage area : Meet the legal requirements. Store in a dry area.

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. iron. paper. polyethylene. MATERIAL TO AVOID: aluminium. zinc.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Calcium hydroxide v.p. (1305-62-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	1 mg/m³ (Respirable fraction)
IOEL STEL	4 mg/m³ (Respirable fraction)
Belgium - Occupational Exposure Limits	
OEL TWA	1 mg/m³
OEL STEL	4 mg/m³
France - Occupational Exposure Limits	
VME (OEL TWA)	1 mg/m³
VLE (OEL C/STEL)	4 mg/m³
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	1 mg/m³ (respirabel)
TGG-8u (OEL TWA) [ppm]	0.33 ppm
TGG-15min (OEL STEL)	4 mg/m³ (respirabel)
TGG-15min (OEL STEL) [ppm]	1.3 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5 mg/m³ 1 mg/m³
WEL STEL (OEL STEL)	4 mg/m³

Calcium hydroxide v.p. (1305-62-0)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m³

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

Calcium hydroxide v.p. (1305-62-0)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	4 mg/m³
Long-term - local effects, inhalation	1 mg/m³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	4 mg/m³
Long-term - local effects, inhalation	1 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0.49 mg/l
PNEC aqua (marine water)	0.32 mg/l
PNEC (Soil)	
PNEC soil	1080 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	3 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

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)

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)

Other skin protection

Materials for protective clothing:
Excellent resistance: Natural rubber. Nitrile rubber. Polyvinylchloride (PVC). Good resistance: Butyl rubber. neoprene (chloroprene rubber). chlorosulfonated polyethylene. Viton

8.2.2.3. Respiratory protection

Respiratory protection:
Dust production: dust mask with filter type P2

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	White to light yellow. Unpurified: grey.
Appearance	:	Crystalline solid. Grains.
Molecular mass	:	74.09 g/mol
Odour	:	Odourless.
Odour threshold	:	Not available
Melting point	:	> 450 °C (EU Method A.1: Melting/freezing point)
Freezing point	:	Not available
Boiling point	:	No data available (test not performed)
Flammability	:	Not available
Explosive limits	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	> 400 °C (EU Method A.16: Relative Self-Ignition Temperature for Solids, T2)
Decomposition temperature	:	No data available in the literature
pH	:	12.4 (0.18 %, 20 °C, EU Method A.6: Water solubility)
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable (solid)
Viscosity, dynamic	:	Not applicable (solid)
Solubility	:	Poorly soluble in water. Substance sinks in water. Soluble in glycerol. Soluble in acids. Soluble in ammoniumchloride. Water: 0.18 g/100ml (20 °C, EU Method A.6: Water solubility)
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	< 0.1 hPa
Vapour pressure at 50°C	:	Not available
Density	:	2220 kg/m³ (20 °C)
Relative density	:	2.22 (20 °C, OECD 109: Density of Liquids and Solids)
Relative vapour density at 20°C	:	Not applicable (solid)
Particle size	:	12.62 µm (MMAD, DIN 55992-1: Determination of a parameter for the dust formation of pigments and extenders - Part 1: Rotation method)

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content	:	Not applicable (inorganic)
Other properties	:	Hygroscopic,Basic reaction

SECTION 10: Stability and reactivity

10.1. Reactivity

Absorbs the atmospheric CO2. Reacts violently with (some) acids: release of heat. Decomposes in moist air.

10.2. Chemical stability

Absorbs the atmospheric CO2. Unstable on exposure to air. Unstable on exposure to moisture. Hygroscopic.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen).

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Calcium hydroxide v.p. (1305-62-0)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2500 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 6.04 mg/l (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 15 day(s))

Skin corrosion/irritation : Causes skin irritation.
pH: 12.4 (0.18 %, 20 °C, EU Method A.6: Water solubility)
Serious eye damage/irritation : Causes serious eye damage.
pH: 12.4 (0.18 %, 20 °C, EU Method A.6: Water solubility)
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Calcium hydroxide v.p. (1305-62-0)	
Viscosity, kinematic	Not applicable (solid)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg),Causes skin irritation,Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg),May cause respiratory irritation,Practically non-toxic by inhalation (LC50 inh, rat > 5 mg/l/4h),Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Harmful to crustacea (Daphnia). Harmful to fishes. Inhibition of activated sludge. Slightly harmful to algae. pH shift.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Not rapidly degradable

Calcium hydroxide v.p. (1305-62-0)	
LC50 - Fish [1]	50.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	49.1 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Estimated value)
ErC50 algae	184.57 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

Calcium hydroxide v.p. (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 v.p. (1305-62-0)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Calcium hydroxide v.p. (1305-62-0)	
Surface tension	72 mN/m (20 °C, 0.1 %, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	Adsorbs into the soil.

12.5. Results of PBT and vPvB assessment

Calcium hydroxide v.p. (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

Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

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

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)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

VOC Directive (2004/42)

VOC content : Not applicable (inorganic)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 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 the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 320).

Storage class (LGK, TRGS 510) : LGK 13 - Non-combustible solids.

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 6.2, LGK 7.

Joint storage with restrictions permitted for : LGK 4.1A, LGK 5.1C.

Joint storage permitted for : LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13.

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Technical Instructions on Air Quality Control (TA Luft)	:	5.2.1 Total Dust, including Micro Dust.

Netherlands

ABM category	:	A(3) - hazardous for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

Denmark

Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product

Switzerland

Storage class (LK)	:	LK 11/13 - Solids

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.