

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Substance name	: Calcium Hydroxide
CAS-No.	: 1305-62-0
Formula	: Ca(OH) ₂

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Nutrient; Dietary Supplement
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1.3. Supplier

Manufacturer

Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
sds@jostchemical.com - www.jostchemical.com

1.4. Emergency telephone number

Emergency number	: For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night United States and Canada: 1-800-424-9300 / +1 703-527-3887 Global: +1 703-741-5970
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Specific target organ toxicity (single exposure) Category 3	H335	May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

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

Precautionary statements (GHS-US)

: P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - If on skin: Wash with plenty of 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 or doctor
P312 - Call a poison center or doctor if you feel unwell
P321 - Specific treatment (see supplemental first aid instruction on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

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P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Calcium Hydroxide (Main constituent)	(CAS-No.) 1305-62-0	100	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

Full text of hazard classes and H-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 : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : Wash immediately with lots of water. Take victim to a doctor if irritation persists. In case of burns: Do not apply (chemical) neutralizing agents. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- 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. Do not apply neutralizing agents. Take victim to an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Causes skin irritation. May cause respiratory irritation. Causes serious eye damage.
- Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties. May cause respiratory irritation.
- Symptoms/effects after skin contact : Red skin. Tingling/irritation of the skin. FOLLOWING SYMPTOMS MAY APPEAR LATER: Blisters. ON CONTINUOUS EXPOSURE/CONTACT: Caustic burns/corrosion of the skin. Irritation.
- Symptoms/effects after eye contact : Corrosion of the eye tissue. Serious damage to eyes.
- Symptoms/effects after ingestion : Nausea. Vomiting. Abdominal pain. Diarrhoea. Burns to the gastric/intestinal mucosa.
- Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

Fire hazard : DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard : INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity : Absorbs the atmospheric CO₂. Reacts violently with (some) acids: release of heat. Decomposes in moist air.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Cool down the containers exposed to heat with a water spray.
Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.
Emergency procedures : Ventilate spillage area. 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. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighborhood 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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, 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/vapor with water curtain.
Methods for cleaning up : Mechanically recover the product. 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. Wash clothing and equipment after handling.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. 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. Remove contaminated clothing immediately. Clean contaminated clothing. Use corrosion-proof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Observe strict hygiene. Keep container tightly closed. 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

Technical measures : Does not require any specific or particular technical measures.

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Storage conditions	: Store in a clean, dry warehouse in the original unopened containers. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Incompatible materials	: Acids. Fluorine.
Storage temperature	: > 5 °C
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: organic materials. (strong) acids. amines. water/moisture.
Storage area	: Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: stainless steel. iron. paper. polyethylene. MATERIAL TO AVOID: aluminum. zinc.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Calcium Hydroxide (1305-62-0)		
DNEL	DNEL	4 mg/m ³ (Acute - local effects, inhalation)
PNEC	PNEC	0.49 mg/l (aqua, freshwater)

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Dust production: dust mask with filter type P2. In case of dust production: protective goggles. Protective clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: natural rubber. neoprene. nitrile rubber. PVC. GIVE GOOD RESISTANCE: butyl rubber. chloroprene rubber. chlorosulfonated polyethylene. viton

Hand protection:

Gloves

Eye protection:

Face shield. In case of dust production: protective goggles. Safety glasses

Skin and body protection:

Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

Respiratory protection:

Dust production: dust mask with filter type P2

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Fine, white powder.
Color	: White to light yellow Unpurified: grey
Odor	: Characteristic odor
Odor threshold	: No data available

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pH	: 12.4 (0.2 %)
Melting point	: > 450 °C (Test data)
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable (solid)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: < 0.1 hPa
Relative vapor density at 20 °C	: Not applicable (solid)
Relative density	: 2.22 (20 °C, Test data)
Specific gravity / density	: 2220 kg/m ³ (20 °C)
Molecular mass	: 74.1 g/mol
Solubility	: Poorly soluble in water. Substance sinks in water. Soluble in glycerol. Soluble in acids. Soluble in ammonium chloride. Water: 0.2 g/100ml
Log Pow	: No data available
Auto-ignition temperature	: > 400 °C
Decomposition temperature	: 580 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: 0 %
Other properties	: Hygroscopic. Substance has 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 dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Acids. Fluorine.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Calcium Hydroxide (1305-62-0)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value)
LD50 dermal rabbit	> 2500 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male/female, Experimental value)

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Skin corrosion/irritation	: Causes skin irritation. pH: 12.4 (0.2 %)
Serious eye damage/irritation	: Causes serious eye damage. pH: 12.4 (0.2 %)
Respiratory or skin sensitization	: Not classified (Lack of data)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Lack of data)
Reproductive toxicity	: Not classified (Lack of data)
Specific target organ toxicity – single exposure	: May cause respiratory irritation.
Specific target organ toxicity – repeated exposure	: Not classified (Lack of data)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic	: No data available
Likely routes of exposure	: Skin and eye contact. Inhalation.
Potential Adverse human health effects and symptoms	: Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Causes skin irritation. May cause respiratory irritation. Causes serious eye damage.
Symptoms/effects after inhalation	: AFTER INHALATION OF DUST: Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties. May cause respiratory irritation.
Symptoms/effects after skin contact	: Red skin. Tingling/irritation of the skin. FOLLOWING SYMPTOMS MAY APPEAR LATER: Blisters. ON CONTINUOUS EXPOSURE/CONTACT: Caustic burns/corrosion of the skin. Irritation.
Symptoms/effects after eye contact	: Corrosion of the eye tissue. Serious damage to eyes.
Symptoms/effects after ingestion	: Nausea. Vomiting. Abdominal pain. Diarrhoea. Burns to the gastric/intestinal mucosa.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

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 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. Harmful to fishes. Groundwater pollutant. Inhibition of activated sludge. Slightly harmful to algae. pH shift.

Calcium Hydroxide (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)
LC50 other aquatic organisms 1	50.6 mg/l (96 hr; Oncorhynchus mykiss)
EC50 Daphnia 1	49.1 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	184.57 mg/l (72h; Pseudokirchnerella subcapitata)
NOEC (acute)	33.3 mg/l (48h; Daphnia magna)
NOEC (chronic)	48 mg/l (72h; Pseudokirchnerella subcapitata)

12.2. Persistence and degradability

Calcium Hydroxide (1305-62-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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)

Ecology - soil	Adsorbs into the soil.
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	: LWCA (the Netherlands): KGA category 05.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Treat using the best available techniques before discharge into drains or the aquatic environment. 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. Recycle/reuse. Remove to an authorized dump (Class I). Remove for physico-chemical/biological treatment.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Proper Shipping Name (Transportation of Dangerous Goods)	: Not regulated for transport
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Transport by sea

Proper Shipping Name (IMDG)	: Not regulated for transport
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Air transport

Proper Shipping Name (IATA)	: Not regulated for transport
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SECTION 15: Regulatory information

15.1. US Federal regulations

Calcium Hydroxide (1305-62-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Calcium Hydroxide (1305-62-0)

Listed on the Canadian DSL (Domestic Substances List)

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EU-Regulations

Calcium Hydroxide (1305-62-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Calcium Hydroxide (1305-62-0)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

Calcium Hydroxide (1305-62-0)

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
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California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 06/07/2018

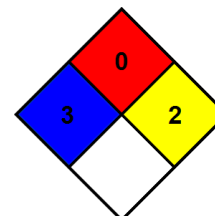
Full text of H-phrases:

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

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.

SDS US (HazCom 2012)

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