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 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 04.04.2022 / 0015
 Replacing version dated / version: 01.11.2021 / 0014
 Valid from: 04.04.2022
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 SCHAEFER PRECAL® - CaO Calciumoxid

Safety data sheet
according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

SCHAEFER PRECAL® - CaO Calciumoxid
 Calcium oxide
 Registration number (ECHA): 01-2119475325-36-XXXX
 Index: ---
 EINECS, ELINCS, NLP, REACH-IT List-No.: 215-138-9
 CAS: 1305-78-8

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

- Sector of use [SU]:
- SU 1 - Agriculture, forestry, fishery
 - SU 2a - Mining, (without offshore industries)
 - SU 2b - Offshore industries
 - SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU 5 - Manufacture of textiles, leather, fur
 - SU 6a - Manufacture of wood and wood products
 - SU 6b - Manufacture of pulp, paper and paper products
 - SU 7 - Printing and reproduction of recorded media
 - SU 8 - Manufacture of bulk, large scale chemicals (including petroleum products)
 - SU 9 - Manufacture of fine chemicals
 - SU10 - Formulation (mixing) of preparations and/or re-packaging (excluding alloys)
 - SU11 - Manufacture of rubber products
 - SU12 - Manufacture of plastics products, including compounding and conversion
 - SU13 - Manufacture of other non-metallic mineral products, e.g. plasters, cement
 - SU14 - Manufacture of basic metals, including alloys
 - SU15 - Manufacture of fabricated metal products, except machinery and equipment
 - SU16 - Manufacture of computer, electronic and optical products, electrical equipment
 - SU17 - General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment.
 - SU18 - Manufacture of furniture
 - SU19 - Building and construction work
 - SU20 - Health services
 - SU21 - Consumer uses: Private households (=general public = consumers)
 - SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
 - SU23 - Electricity, steam, gas water supply and sewage treatment
 - SU24 - Scientific research and development
- Chemical product category [PC]:
- PC 1 - Adhesives, sealants
 - PC 2 - Adsorbents
 - PC 3 - Air care products
 - PC 7 - Base metals and alloys
 - PC 9a - Coatings and paints, thinners, paint removers
 - PC 9b - Fillers, putties, plasters, modelling clay
 - PC11 - Explosives
 - PC12 - Fertilizers
 - PC13 - Fuels
 - PC14 - Metal surface treatment products
 - PC15 - Non-metal-surface treatment products
 - PC16 - Heat transfer fluids
 - PC17 - Hydraulic fluids
 - PC18 - Ink and toners
 - PC19 - Removed from PC list and relocated in the technical function list
 - PC20 - Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 - PC21 - Laboratory chemicals
 - PC23 - Leather treatment products
 - PC24 - Lubricants, greases, release products
 - PC25 - Metal working fluids
 - PC26 - Paper and board treatment products
 - PC27 - Plant protection products
 - PC28 - Perfumes, fragrances
 - PC30 - Photo-chemicals
 - PC31 - Polishes and wax blends
 - PC32 - Polymer preparations and compounds
 - PC33 - Semiconductors
 - PC34 - Textile dyes, and impregnating products
 - PC35 - Washing and cleaning products
 - PC36 - Water softeners
 - PC37 - Water treatment chemicals
 - PC38 - Welding and soldering products, flux products
 - PC40 - Extraction agents
- Process category [PROC]:
- PROC 1 - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 - PROC 2 - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC 3 - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC 4 - Chemical production where opportunity for exposure arises
 - PROC 5 - Mixing or blending in batch processes

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PROC 6 - Calendering operations
 PROC 7 - Industrial spraying
 PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities
 PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 PROC10 - Roller application or brushing
 PROC12 - Use of blowing agents in manufacture of foam
 PROC13 - Treatment of articles by dipping and pouring
 PROC14 - Tableting, compression, extrusion, pelletisation, granulation
 PROC15 - Use a laboratory reagent.
 PROC16 - Use of fuels
 PROC17 - Lubrication at high energy conditions in metal working operation
 PROC18 - General greasing/lubrication at high kinetic energy conditions
 PROC19 - Manual activities involving hand contact
 PROC21 - Low energy manipulation and handling of substances bound in/on materials or articles
 PROC22 - Manufacturing and processing of minerals and/or metals at substantially elevated temperature
 PROC23 - Open processing and transfer operations at substantially elevated temperature
 PROC24 - High (mechanical) energy work-up of substances bound in /on materials and/or articles
 PROC25 - Other hot work operations with metals
 PROC26 - Handling of solid inorganic substances at ambient temperature
 PROC27a - Production of metal powders (hot processes)
 PROC27b - Production of metal powders (wet processes)
 Article Categories [AC]:
 AC 1 - Vehicles
 AC 2 - Machinery, mechanical appliances, electrical/electronic articles
 AC 3 - Electrical batteries and accumulators
 AC 4 - Stone, plaster, cement, glass and ceramic articles
 AC 5 - Fabrics, textiles and apparel
 AC 6 - Leather articles
 AC 7 - Metal articles
 AC 8 - Paper articles
 AC10 - Rubber articles
 AC11 - Wood articles
 AC13 - Plastic articles
 Environmental Release Category [ERC]:
 ERC 1 - Manufacture of the substance
 ERC 2 - Formulation into mixture
 ERC 3 - Formulation into solid matrix
 ERC 4 - Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 ERC 5 - Use at industrial site leading to inclusion into/onto article
 ERC 6a - Use of intermediate
 ERC 6b - Use of reactive processing aid at industrial site (no inclusion into or onto article)
 ERC 6c - Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
 ERC 6d - Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
 ERC 7 - Use of functional fluid at industrial site
 ERC 8a - Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 ERC 8b - Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
Uses advised against:
 Chemical product category [PC]:
 PC 8 - Biocidal products

1.3 Details of the supplier of the safety data sheet

SCHAEFER KALK GmbH & Co. KG
 Louise-Seher-Strasse 6
 65582 Diez
 Tel.: +49-6432-503-0
 Fax: +49-6432-503-269
 Email: info@schaeferkalk.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (SKC)
 +1 872 5888271 (SKC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement |
|--------------|-----------------|--|
| STOT SE | 3 | H335-May cause respiratory irritation. |
| Skin Irrit. | 2 | H315-Causes skin irritation. |
| Eye Dam. | 1 | H318-Causes serious eye damage. |

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

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Danger

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

P102-Keep out of reach of children.
 P261-Avoid breathing dust. P280-Wear protective gloves / protective clothing and eye protection / face protection.
 P302+P352-IF ON SKIN: Wash with plenty of water and soap. 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 / doctor.
 P501-Dispose of contents / container in accordance with all local, regional, national and international laws.

2.3 Other hazards

No vPvB substance
 No PBT substance
 No substance with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

3.1 Substances

| Calcium oxide | Substance for which an EU exposure limit value applies. |
|--|--|
| Registration number (REACH) | 01-2119475325-36-XXXX |
| Index | --- |
| EINECS, ELINCS, NLP, REACH-IT List-No. | 215-138-9 |
| CAS | 1305-78-8 |
| content % | |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 |

3.2 Mixtures

n.a.
 This is a substance with minor constituents of geological origin.
 For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
 The substances named in this section are given with their actual, appropriate classification!
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!
 Never pour anything into the mouth of an unconscious person!

Inhalation

Move source of dust or move affected person to fresh air. Obtain medical attention immediately.

Skin contact

Carefully and gently brush the contaminated body surfaces in order to remove all traces of product.
 Wash affected area immediately with plenty of water for 15 to 20 minutes. Take off contaminated clothing.
 If applicable, consult doctor if necessary.

Eye contact

Rinse eyes with special adsorption solution such as, for example, Previn or any other suitable eye wash solution for at least 3 minutes or at least with one litre.
 If not at hand, rinse with water for 10 minutes. If symptoms persist, repeat the procedure. Visit an ophthalmologist.

Ingestion

Wash mouth with water and drink copious quantities of water. Do not induce vomiting. Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
 In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

Eye-rinse bottle
 No known delayed effects. Consult a physician for all exposures except for minor instances.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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Suitable extinguishing media

The substance is not flammable, and non-combustible, it inhibits the spread of flame.
 The product reacts with water and generates heat. This may cause risk to flammable material.
 The product does not burn.
 Adapt to the nature and extent of fire.
 Exinction powder
 Foam
 CO2

Unsuitable extinguishing media

Avoid water and the humidification of the quicklime.

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

None

5.3 Advice for firefighters

For personal protective equipment see Section 8.
 Protective respirator with independent air supply.
 Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
 Ensure sufficient ventilation, remove sources of ignition.
 Avoid dust formation with solid or powder products.
 Leave the danger zone if possible, use existing emergency plans if necessary.
 Avoid contact with skin and eyes.
 Avoid creating dust, ensure adequate ventilation or adequate respiratory protection (see Section 8).

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 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).
 Inform the competent authorities when water or canalisation has been infiltrated.

6.3 Methods and material for containment and cleaning up

Keep the material dry if possible.
 Pick up the product mechanically in a dry way. Use vacuum suction unit, or shovel into bags.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Avoid contact with skin and eyes.
 Wear protective equipment (see section 8).
 Keep dust levels to a minimum. Minimise dust generation. Enclose dust sources.
 If applicable, suction measures at the workstation or on the processing machine necessary.
 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.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
 Not to be stored in gangways or stair wells.
 Store product closed and only in original packing.
 Store in a dry place.
 Minimise contact with air and moisture. Bulk storage should be in purpose - designed silos.
 Keep away from acids, significant quantities of paper, straw, and nitro compounds.
 Keep out of the reach of children.
 Do not use aluminium for transport or storage if there is a risk of contact with water.
 Ensure sufficient ventilation.
 Avoid build up of dust.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Chemical Name | Calcium oxide | Content %: | |
|--------------------------------|---------------------------------|------------|--|
| WEL-TWA: 1 mg/m3 (9) (WEL, EU) | WEL-STEL: 4 mg/m3 (9) (WEL, EU) | --- | |
| Monitoring procedures: | --- | | |
| BMGV: --- | Other information: --- | | |

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| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
|---------------------|--|---------------------------|------------|-------|------------------|------|
| | Environment - freshwater | | PNEC | 0,37 | mg/l | |
| | Environment - marine | | PNEC | 0,24 | mg/l | |
| | Environment - soil | | PNEC | 817,4 | mg/kg dry weight | |
| | Environment - sewage treatment plant | | PNEC | 2,27 | mg/l | |
| Consumer | Human - inhalation | Short term, local effects | DNEL | 4 | mg/m3 | |
| Consumer | Human - inhalation | Long term, local effects | DNEL | 1 | mg/m3 | |
| Workers / employees | Human - inhalation | Short term, local effects | DNEL | 4 | mg/m3 | |
| Workers / employees | Human - inhalation | Long term, local effects | DNEL | 1 | mg/m3 | |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
 (8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
 Applies only if maximum permissible exposure values are listed here.
 Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
 These are specified by e.g. EN 14042.
 EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".
 Handling systems should preferably be enclosed or suitable ventilation installed to maintain atmospheric dust below the OES.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).
 Face protection (EN 166).
 Do not wear contact lenses when handling this product.

Skin protection - Hand protection:

Nitrile-soaked cotton gloves with CE sign (EN ISO 374).
 Protective hand cream recommended.

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
 The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).
 Clothing fully covering skin.
 Full length pants, long sleeved overalls, with close fittings at openings.
 Wear acid-proof, resp. alkali-resistant and dust-tight shoes.
 If heavily exposed daily, employees must shower, and if necessary use a barrier cream to protect exposed skin, particularly neck, face and wrists.

Respiratory protection:

Wear approved respiratory protection mask to EN 149 Category FFP2 (colour code white) or Airstream helmet for high exposure levels.
 Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).
 Selection of materials derived from glove manufacturer's indications.
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
 Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
 In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

8.2.3 Environmental exposure controls

All ventilation systems should be filtered before discharge to atmosphere.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|-----------------|----------------------|
| Physical state: | fine powder or lumpy |
| Physical state: | Solid |
| Colour: | Beige |

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| | |
|---|--|
| Colour: | White |
| Odour: | Odourless |
| Odour threshold: | Not applicable |
| Melting point/freezing point: | >450 °C (Regulation (EC) 440/2008 A.1. (MELTING/FREEZING TEMPERATURE)) |
| Boiling point or initial boiling point and boiling range: | Not applicable |
| Flammability: | Not flammable (Regulation (EC) 440/2008 A.10. (FLAMMABILITY (SOLIDS))) |
| Lower explosion limit: | Does not apply to solids. |
| Upper explosion limit: | Not flammable |
| Flash point: | Does not apply to solids. |
| Auto-ignition temperature: | No |
| Decomposition temperature: | Not applicable |
| pH: | 12,3 (20°C, saturated solution) |
| Kinematic viscosity: | Not applicable |
| Solubility: | 1337,6 mg/l (Regulation (EC) 440/2008 A.6. (WATER SOLUBILITY)) |
| Partition coefficient n-octanol/water (log value): | n.a. |
| Vapour pressure: | Not applicable |
| Density and/or relative density: | 3,31 (Regulation (EC) 440/2008 A.3. (RELATIVE DENSITY), relative density) |
| Relative vapour density: | Not applicable |
| Particle characteristics: | There is no information available on this parameter. |
| 9.2 Other information | |
| Explosives: | There is no information available on this parameter. |
| Oxidizing solids: | No |
| Formation of explosible dust/air mixtures: | Not flammable |

SECTION 10: Stability and reactivity

10.1 Reactivity

See also Subsection 10.2 to 10.6.
The product has not been tested.

10.2 Chemical stability

See also Subsection 10.1 to 10.6.
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

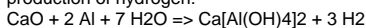
See also Subsection 10.1 to 10.6.

10.4 Conditions to avoid

Minimise exposure to air and moisture.

10.5 Incompatible materials

Calcium oxide reacts exothermically with water to form Calcium hydroxide:
 $\text{CaO} + \text{H}_2\text{O} \Rightarrow \text{Ca}(\text{OH})_2 + 1155 \text{ kJ/kg CaO}$
 Calcium oxide reacts exothermically with acids to form Calcium salts.
 Calcium oxide reacts with aluminium in the presence of moisture leading to the production of hydrogen:



10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.
n.a.

SECTION 11: Toxicological information

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

Possibly more information on health effects, see Section 2.1 (classification).

| Calcium oxide | | | | | | |
|------------------------------------|----------|-------|-------|----------|--|--|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Acute toxicity, by oral route: | LD50 | >2000 | mg/kg | Rat | OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure) | |
| Acute toxicity, by dermal route: | LD50 | >2500 | mg/kg | Rabbit | OECD 402 (Acute Dermal Toxicity) | Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. n.d.a. |
| Acute toxicity, by inhalation: | | | | | | |
| Skin corrosion/irritation: | | | | | OECD 431 (In Vitro Skin Corrosion - Human Skin Model Test) | Non-caustic, Analogous conclusion, Calcium dihydroxide |
| Skin corrosion/irritation: | | | | Rabbit | | Irritant, in vivo |
| Serious eye damage/irritation: | | | | Rabbit | | Risk of serious damage to eyes., in vivo |
| Respiratory or skin sensitisation: | | | | | | Not to be expected |
| Germ cell mutagenicity: | | | | | OECD 471 (Bacterial Reverse Mutation Test) | Negative, Analogous conclusion, Calcium dihydroxide |
| Germ cell mutagenicity: | | | | | OECD 473 (In Vitro Mammalian Chromosome Aberration Test) | Negative, Analogous conclusion, Calcium dihydroxide |
| Germ cell mutagenicity: | | | | | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test) | Negative, Analogous conclusion, Calcium dihydroxide |
| Carcinogenicity: | | | | | | n.d.a. |
| Reproductive toxicity: | | | | | | n.d.a. |

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| | | | | | | |
|---|--|----|------------|-------|--|---|
| Carcinogenicity: | | | | Rat | | Analogous conclusion, Negative, administered as Ca-lactate |
| Reproductive toxicity: | | | | Mouse | | Analogous conclusion, Negative, administered as Ca-carbonate |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | | Irritation of the respiratory tract |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | 36 | mg/kg bw/d | | | oral (UL by SCF) |
| Specific target organ toxicity - repeated exposure (STOT-RE): | | | | | | Negative, dermal |
| Aspiration hazard: | | | | | | No |
| Aspiration hazard: | | | | | | n.d.a. |
| Symptoms: | | | | | | breathing difficulties, respiratory distress, drowsiness, diarrhoea, thirst, vomiting, cornea opacity, coughing, headaches, mucous membrane irritation, shock, sweating |

11.2. Information on other hazards

| Calcium oxide | | | | | | |
|----------------------------------|----------|-------|------|----------|-------------|---|
| Toxicity / effect | Endpoint | Value | Unit | Organism | Test method | Notes |
| Endocrine disrupting properties: | | | | | | n.d.a. |
| Other information: | | | | | | No other relevant information available on adverse effects on health. |

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

| Calcium oxide | | | | | | | |
|----------------------------|-----------|------|-------|------|----------|-------------|---|
| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
| 12.1. Toxicity to fish: | LC50 | 96h | 50,6 | mg/l | | | freshwater, Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. |
| 12.1. Toxicity to fish: | LC50 | 96h | 457 | mg/l | | | marine water, Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. |
| 12.1. Toxicity to daphnia: | EC50 | 48h | 49,1 | mg/l | | | freshwater, Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. |
| 12.1. Toxicity to daphnia: | LC50 | 96h | 158 | mg/l | | | marine water, Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 14d | 32 | mg/l | | | marine water, Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. |

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| | | | | | | | |
|--|-----------|-----|--------|----------|--|--|---|
| 12.1. Toxicity to algae: | NOEC/NOEL | 72h | 48 | mg/l | | | freshwater, Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. |
| 12.1. Toxicity to algae: | EC50 | 72h | 184,57 | mg/l | | | freshwater, Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. |
| 12.2. Persistence and degradability: | | | | | | | Not relevant for inorganic substances. |
| 12.3. Bioaccumulative potential: | | | | | | | Not relevant for inorganic substances. |
| 12.4. Mobility in soil: | | | | | | | Calcium oxide reacts with water and/or carbon dioxide to form respectively calcium dihydroxide and/or calcium carbonate, which are sparingly, and so present a low mobility in most ground. |
| 12.5. Results of PBT and vPvB assessment | | | | | | | Not relevant for inorganic substances. |
| 12.7. Other adverse effects: | | | | | | | pH-value of > 12 will rapidly decrease as result of dilution and carbonation., Even though this product can be used to neutralise over-acidified water, when 1g/l is exceeded organisms in the water may be affected adversely. |
| 12.7. Other adverse effects: | | | | | | | n.d.a. |
| Toxicity to bacteria: | | | | | | | In high concentrations the product provokes an increase in temperature and of the pH-value. It is used to sanitise sewage sludge |
| Other organisms: | NOEC/NOEL | | 2000 | mg/kg dw | | | Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. soil macroorganisms |
| Other organisms: | NOEC/NOEL | | 12000 | mg/kg dw | | | Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. soil microorganisms |
| Other organisms: | NOEC/NOEL | 21d | 1080 | mg/kg | | | Calcium dihydroxide, The results are applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed. terrestrial plants |

SECTION 13: Disposal considerations

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13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

10 13 04 wastes from calcination and hydration of lime

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Protect from humidity.

For contaminated packing material

Pay attention to local and national official regulations.

Uncontaminated packaging can be recycled.

SECTION 14: Transport information

General statements

14.1. UN number or ID number: 1910

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

UN 1910 NO SUBJECT TO ADR

14.3. Transport hazard class(es):

14.4. Packing group:

n.a.

Classification code:

n.a.

LQ:

n.a.

14.5. Environmental hazards:

Not applicable

Tunnel restriction code:

Transport by sea (IMDG-code)

14.2. UN proper shipping name:

NO SUBJECT TO IMDG

14.3. Transport hazard class(es):

14.4. Packing group:

n.a.

EmS:

--

Marine Pollutant:

n.a.

14.5. Environmental hazards:

Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:

Calcium oxide

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

14.5. Environmental hazards:

Not applicable

14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Avoid any release of dust during transportation, by using tight tanks for powders.

When loading lump lime cover loading surfaces to avoid dust from developing.

Comply with special provisions.



SECTION 15: Regulatory information

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

Observe restrictions:

Comply with trade association/occupational health regulations.

15.2 Chemical safety assessment

A chemical safety assessment was carried out for the following substance(s):

Calcium oxide

SECTION 16: Other information

Revised sections: 1, 15

Link exposure scenarios (Annex as a separate document):

https://sichdatonline.chemical-check.de/Dokumente/714/EX/A-1_0015_04-04-2022_EN_EX.pdf

Registration/listing status:

EU: 1305-78-8

ECOIN CAS: 215-138-9

EINECS No.: 1-189

JAPAN: ISHL

ENCS No.: KE-04588

KOREA: ECL Serial No.:

SWITZERLAND: G-1351

Swiss No.:

GB

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USA:
 TSCA, FIFRA, DOT, FDA, NIOSH, OSHA, ACGIH, STATE
 CANADA:
 DSL, WHMIS
 AUSTRALIA:
 AICS
 NEW ZEALAND:
 NZIoC
 PHILIPPINES:
 PICCS
 CHINA:
 IECS
 MEXICO:
 INSQ

References

90/269/EWG
 Booklet L64 - Safety Signs and Signals. The Health and Safety (Safety Signs and Signals) Regulation 1996 -
 Guidance on Regulations (HSE) - ISBN 0 7176 0870 0
 IUCLID Dataset 2000
 Merck Index (Ed. Merck & Co, Rahway, USA)
 Anonymous, 2006:
 Tolerable upper intake levels for vitamins and minerals Scientific Committee on Food,
 European Food Safety Authority, ISBN: 92-9199-014-0 [SFC document]
 Anonymous, 2008:
 Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for calcium oxide (CaO) and calcium dihydroxid (Ca(OH)₂), European Commission,
 DG Employment, Social Affairs and Equal Opportunities, SCOEL/SUM 137 February 2008

Employee training in handling dangerous goods is required.
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.
 The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.

STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation
 Skin Irrit. — Skin irritation
 Eye Dam. — Serious eye damage

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
 Guidelines for the preparation of safety data sheets as amended (ECHA).
 Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
 Safety data sheets for the constituent substances.
 ECHA Homepage - Information about chemicals.
 GESTIS Substance Database (Germany).
 German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
 EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
 National Lists of Occupational Exposure Limits for each country as amended.
 Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOX Adsorbable organic halogen compounds
 approx. approximately
 Art., Art. no. Article number
 ASTM ASTM International (American Society for Testing and Materials)
 ATE Acute Toxicity Estimate
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BCF Bioconcentration factor
 BSEF The International Bromine Council
 bw body weight
 CAS Chemical Abstracts Service
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 DOC Dissolved organic carbon
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
 EC European Community
 ECHA European Chemicals Agency
 ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
 EEC European Economic Community
 EINECS European Inventory of Existing Commercial Chemical Substances
 ELINCS European List of Notified Chemical Substances
 EN European Norms
 EPA United States Environmental Protection Agency (United States of America)

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ErCx, EpCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
 etc. et cetera
 EU European Union
 EVAL Ethylene-vinyl alcohol copolymer
 Fax. Fax number
 gen. general
 GHS Globally Harmonized System of Classification and Labelling of Chemicals
 GWP Global warming potential
 Koc Adsorption coefficient of organic carbon in the soil
 Kow octanol-water partition coefficient
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC (Code) International Bulk Chemical (Code)
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCLID International Uniform Chemical Information Database
 IUPAC International Union for Pure Applied Chemistry
 LC50 Lethal Concentration to 50 % of a test population
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
 Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
 Log Kow, Log Pow Logarithm of octanol-water partition coefficient
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships
 n.a. not applicable
 n.av. not available
 n.c. not checked
 n.d.a. no data available
 NIOSH National Institute for Occupational Safety and Health (USA)
 NLP No-longer-Polymer
 NOEC, NOEL No Observed Effect Concentration/Level
 OECD Organisation for Economic Co-operation and Development
 org. organic
 OSHA Occupational Safety and Health Administration (USA)
 PBT persistent, bioaccumulative and toxic
 PE Polyethylene
 PNEC Predicted No Effect Concentration
 ppm parts per million
 PVC Polyvinylchloride
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
 REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
 RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
 SVHC Substances of Very High Concern
 Tel. Telephone
 TOC Total organic carbon
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
 VOC Volatile organic compounds
 vPvB very persistent and very bioaccumulative
 wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.

These statements were made by:

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