

Page 1 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
 PDF print date: 10.04.2018  
 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: 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 8 - Biocidal products
  - 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

CE

Page 2 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
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 SCHAEFER PRECAL® - CaO Calciumoxid

- PROC 5 - Mixing or blending in batch processes
- 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:**

No information available at present.

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

CE  
 SCHAEFER KALK GmbH & Co. KG, Louise-Seher-Strasse 6, 65582 Diez, Germany  
 Phone:+49-6432-503-0, Fax:+49-6432-503-269  
 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:**

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**Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (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)**

Page 3 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
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Calcium oxide  
 CAS: 1305-78-8, Index:--- EC: 215-138-9

**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  
 Calcium oxide reacts with water and forms a lye.  
 In contrast to the powder itself, the product, when diluted with water, can produce severe skin damage in humans, (alkaline burns), especially if prolonged skin contacts takes place.  
 Irritant effect on skin and mucous membranes.

**SECTION 3: Composition/information on ingredients**

**3.1 Substance**

Calcium oxide	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119475325-36-XXXX
Index	---
EINECS, ELINCS, NLP	215-138-9
CAS	1305-78-8
content %	
Classification according to Regulation (EC) 1272/2008 (CLP)	STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318

**3.2 Mixture**

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.

**Eye contact**

rinse with Previn(r) rinsing solution for at least 3 minutes, rinse with at least one litre respectively (OH<sup>-</sup> ions are bound and inactivated - adsorption).  
 Consult medical specialist.

**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**

Page 4 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
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 SCHAEFER PRECAL® - CaO Calciumoxid

**5.1 Extinguishing media**

**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.  
 Extinguishing powder

Foam

CO<sub>2</sub>

**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**

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**

Avoid contact with skin and eyes.  
 Avoid creating dust, ensure adequate ventilation or adequate respiratory protection (see Section 8).

**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: 2 mg/m3 (WEL-TWA), 1 mg/m3 (9) (EU)	WEL-STEL: 4 mg/m3 (9) (EU)	---
Monitoring procedures: ---		
BMGV: ---	Other information: ---	

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 (2017/164/EU). (9) = Respirable fraction (2017/164/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).  
 (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/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.

**8.2 Exposure controls**

Page 5 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
 PDF print date: 10.04.2018  
 SCHAEFER PRECAL® - CaO Calciumoxid

Calcium oxide						
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	

### 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. BS EN 14042.  
 BS 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 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
Colour:	White
Odour:	Odourless
Odour threshold:	Not applicable
pH-value:	12,3 (20°C, saturated solution )
Melting point/freezing point:	>450 °C (Regulation (EC) 440/2008 A.1. (MELTING/FREEZING TEMPERATURE))
Initial boiling point and boiling range:	Not applicable
Flash point:	n.a.
Evaporation rate:	Not determined
Flammability (solid, gas):	Not flammable (Regulation (EC) 440/2008 A.10. (FLAMMABILITY (SOLIDS)))
Lower explosive limit:	Not flammable
Upper explosive limit:	Not flammable
Vapour pressure:	Not applicable
Vapour density (air = 1):	Not applicable

Page 6 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
 PDF print date: 10.04.2018  
 SCHAEFER PRECAL® - CaO Calciumoxid

Density:	3,31 (Regulation (EC) 440/2008 A.3. (RELATIVE DENSITY), relative density )
Bulk density:	700-1100 kg/m <sup>3</sup> (20°C, Not determined )
Solubility(ies):	Not determined
Water solubility:	1337,6 mg/l (Regulation (EC) 440/2008 A.6. (WATER SOLUBILITY))
Partition coefficient (n-octanol/water):	n.a.
Auto-ignition temperature:	No
Decomposition temperature:	Not applicable
Viscosity:	Not applicable
Explosive properties:	Not determined
Oxidising properties:	No
<b>9.2 Other information</b>	
Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

#### 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

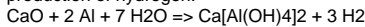
See also Subsection 10.1 to 10.6.

##### 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 toxicological effects

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.
Acute toxicity, by inhalation:						n.d.a.
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:				Rat		Analogous conclusion, Negative, administered as Ca-lactate
Reproductive toxicity:				Mouse		Analogous conclusion, Negative, administered as Ca-carbonate

Page 7 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
 PDF print date: 10.04.2018  
 SCHAEFER PRECAL® - CaO Calciumoxid

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
Symptoms:						breathing difficulties, respiratory distress, drowsiness, diarrhoea, thirst, vomiting, cornea opacity, coughing, headaches, mucous membrane irritation, shock, sweating

**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.
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.

Page 8 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
 PDF print date: 10.04.2018  
 SCHAEFER PRECAL® - CaO Calciumoxid

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.
12.6. 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.
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**

**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:

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):



Page 9 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
 PDF print date: 10.04.2018  
 SCHAEFER PRECAL® - CaO Calciumoxid

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. Transport in bulk according to Annex II of MARPOL and the IBC Code**

Freight 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.  
 Observe Regulation (EU) No 528/2012 concerning the placing of biocidal products on the market.

**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: 8, 11, 12

**Link exposure scenarios (Annex as a separate document):**

[https://sichdatonline.chemical-check.de/Dokumente/714/EX/A-1\\_0013\\_20-03-2018\\_EN\\_EX.pdf](https://sichdatonline.chemical-check.de/Dokumente/714/EX/A-1_0013_20-03-2018_EN_EX.pdf)

**Registration/listing status:**

EU:  
 ECOIN CAS: 1305-78-8  
 EINECS No.: 215-138-9  
 JAPAN:  
 ENCS No.: 1-189  
 ISHL  
 KOREA:  
 ECL Serial No.: KE-04588  
 SWITZERLAND:  
 Swiss No.: G-1351

USA:  
TSCA, FIFRA, DOT, FDA, NIOSH, OSHA, ACGIH, STATE

CANADA:  
 DSL, WHMIS  
 AUSTRALIA:  
 AICS  
 NEW ZEALAND:  
 NZIoC  
 PHILIPPINES:  
 PICCS  
 CHINA:  
 IECSC  
 MEXICO:  
 INSQ

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90/269/EWG  
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 Guidance on Regulations (HSE) - ISBN 0 7176 0870 0  
 IUCLID Dataset 2000  
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Page 10 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
 Valid from: 20.03.2018  
 PDF print date: 10.04.2018  
 SCHAEFER PRECAL® - CaO Calciumoxid

Tolerable upper intake levels for vitamins and minerals Scientific Committee on Food,  
 European Food Safety Authority, ISBN: 92-9199-014-0 [SFC document]  
 Anonymus, 2008:  
 Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for calcium oxide (CaO) and calcium dihydroxid (Ca(OH)<sub>2</sub>), 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

**Any abbreviations and acronyms used in this document:**

AC Article Categories  
 acc., acc. to according, according to  
 ACGIH American Conference of Governmental Industrial Hygienists  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOEL Acceptable Operator Exposure Level  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)  
 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  
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)  
 BHT Butylhydroxytoluol (= 2,6-Di-*t*-butyl-4-methyl-phenol)  
 BMGV Biological monitoring guidance value (EH40, UK)  
 BOD Biochemical oxygen demand  
 BSEF Bromine Science and Environmental Forum  
 bw body weight  
 CAS Chemical Abstracts Service  
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids  
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques  
 CIPAC Collaborative International Pesticides Analytical Council  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 COD Chemical oxygen demand  
 CTFA Cosmetic, Toiletry, and Fragrance Association  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 DT50 Dwell Time - 50% reduction of start concentration  
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EC European Community  
 ECHA European Chemicals Agency  
 EEA European Economic Area  
 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)  
 ERC Environmental Release Categories  
 ES Exposure scenario  
 etc. et cetera  
 EU European Union  
 EWC European Waste Catalogue  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane  
 HGWP Halocarbon Global Warming Potential  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC Intermediate Bulk Container  
 IBC (Code) International Bulk Chemical (Code)  
 IC Inhibitory concentration  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 LC lethal concentration  
 LC50 lethal concentration 50 percent kill  
 LCLo lowest published lethal concentration

Page 11 of 11  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 20.03.2018 / 0013  
 Replacing version dated / version: 21.07.2017 / 0012  
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 SCHAEFER PRECAL® - CaO Calciumoxid

LD Lethal Dose of a chemical  
 LD50 Lethal Dose, 50% kill  
 LDLo Lethal Dose Low  
 LOAEL Lowest Observed Adverse Effect Level  
 LOEC Lowest Observed Effect Concentration  
 LOEL Lowest Observed Effect Level  
 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 of Occupational Safety and Health (United States of America)  
 NOAEC No Observed Adverse Effective Concentration  
 NOAEL No Observed Adverse Effect Level  
 NOEC No Observed Effect Concentration  
 NOEL No Observed Effect Level  
 ODP Ozone Depletion Potential  
 OECD Organisation for Economic Co-operation and Development  
 org. organic  
 PAH polycyclic aromatic hydrocarbon  
 PBT persistent, bioaccumulative and toxic  
 PC Chemical product category  
 PE Polyethylene  
 PNEC Predicted No Effect Concentration  
 POCP Photochemical ozone creation potential  
 ppm parts per million  
 PROC Process category  
 PTFE Polytetrafluorethylene  
 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)  
 SADT Self-Accelerating Decomposition Temperature  
 SAR Structure Activity Relationship  
 SU Sector of use  
 SVHC Substances of Very High Concern  
 Tel. Telephone  
 ThOD Theoretical oxygen demand  
 TOC Total organic carbon  
 TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)  
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
 VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
 VOC Volatile organic compounds  
 vPvB very persistent and very bioaccumulative  
 WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
 WHO World Health Organization  
 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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