

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 1 of 11

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Calcium oxide pure fine powder

CAS No: 1305-78-8

EC No: 215-138-9

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

Laboratory chemical

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH

Street: Stempelstraße 6

Place: D-47167 Duisburg

Telephone: 0203/5194-0

Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit

Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de

Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Skin Irrit. 2; H315

Eye Dam. 1; H318

STOT SE 3; H335

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008**

Signal word: Danger

Pictograms:

**Hazard statements**

H315

Causes skin irritation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 2 of 11

H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
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.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: CaO
Molecular weight: 56,07 g/mol

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
		REACH No
	Classification (Regulation (EC) No 1272/2008)	
1305-78-8	calcium oxide	100 %
	215-138-9	
	Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H315 H318 H335	

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
1305-78-8	215-138-9	calcium oxide	100 %
		inhalation: LC50 = > 6,04 mg/l (dusts or mists); dermal: LD50 = > 2500 mg/kg; oral: LD50 = > 2000 mg/kg	

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.
Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 3 of 11

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

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

Irritant
corrosive
Risk of serious damage to eyes.
Corneal opacity.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible solids

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.
Avoid contact with skin, eyes and clothes.

Additional information

Suppress gases/vapours/mists with water spray jet.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 4 of 11

Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used.
Avoid dust formation.
Do not breathe dust.
Read label before use.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Take off contaminated clothing. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary.
Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Unsuitable container/equipment material: Light metal

Further information on storage conditions

Keep container tightly closed.
Store in a dry place.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
1305-78-8	Calcium oxide (Respirable Fraction)	-	1		TWA (8 h)	
		-	4		STEL (15 min)	

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 5 of 11

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
1305-78-8	calcium oxide		
Worker DNEL, long-term	inhalation	local	1 mg/m ³
Worker DNEL, acute	inhalation	local	4 mg/m ³
Consumer DNEL, long-term	inhalation	local	1 mg/m ³
Consumer DNEL, acute	inhalation	local	4 mg/m ³

PNEC values

CAS No	Substance	
Environmental compartment	Value	
1305-78-8	calcium oxide	
Freshwater	0,37 mg/l	
Freshwater (intermittent releases)	0,37 mg/l	
Marine water	0,24 mg/l	
Micro-organisms in sewage treatment plants (STP)	2,27 mg/l	
Soil	817,4 mg/kg	

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaust at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <,>) supplied by us and for the designated use. When dissolving in or mixing with other substances

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 6 of 11

and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Filtering device with filter or ventilator filtering device of type: P2

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	white	
Odour:	odourless	
Odour threshold:	not determined	
Melting point/freezing point:		2580 °C
Boiling point or initial boiling point and boiling range:		2850 °C
Flammability:		not determined
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		X
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value (at 20 °C):		12,6
Viscosity / kinematic:		not determined
Water solubility: (at 20 °C)		1,65 g/L
Solubility in other solvents		not determined
Dissolution rate:		not determined
Partition coefficient n-octanol/water:		not determined
Dispersion stability:		not determined
Vapour pressure:		not determined
Vapour pressure:		not determined
Density (at 20 °C):		3,37 g/cm ³
Relative density:		not determined
Bulk density:		800-1200 kg/m ³
Relative vapour density:		not determined
Particle characteristics:		not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties		
not applicable		
Sustaining combustion:		No data available
Self-ignition temperature		
Solid:		not determined
Gas:		not applicable
Oxidizing properties		
Not oxidising.		

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 7 of 11

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined
Solid content:	100%
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
not determined:	
Viscosity / dynamic:	not determined
Flow time:	not determined

Further Information

not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Exothermic reaction with: Water

10.2. Chemical stability

Protect against: Humidity

10.3. Possibility of hazardous reactions

Water
Light metal
Acids
Alcohols
Hydrogen halide

10.4. Conditions to avoid

Humidity

10.5. Incompatible materials

Light metal

10.6. Hazardous decomposition products

No data available

Further information

No data available

SECTION 11: Toxicological information

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

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Based on available data, the classification criteria are not met.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 8 of 11

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1305-78-8	calcium oxide				
	oral	LD50 > 2000 mg/kg	Rat	Study report (2007)	OECD Guideline 425
	dermal	LD50 > 2500 mg/kg	Rabbit	Study report (1994)	EU Method B.3
	inhalation (4 h) dust/mist	LC50 > 6,04 mg/l	Rat	Study report (2010)	OECD Guideline 436

Irritation and corrosivity

Causes skin irritation.
Causes serious eye damage.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation. (calcium oxide)

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

Irritant
corrosive
Risk of serious damage to eyes.
Corneal opacity.

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 9 of 11

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
1305-78-8	calcium oxide					
	Acute fish toxicity	LC50 mg/l	50,6	96 h	Oncorhynchus mykiss	REACH Registration Dossier
	Acute algae toxicity	ErC50 mg/l	184,57	72 h	Pseudokirchneriella subcapitata	REACH Registration Dossier
	Acute crustacea toxicity	EC50 mg/l	49,1	48 h	Daphnia magna	REACH Registration Dossier
	Crustacea toxicity	NOEC	32 mg/l	14 d	Crangon septemspinosa	REACH Registration Dossier
	Acute bacteria toxicity	(EC50 mg/l)	300,4	3 h	activated sludge of a predominantly domestic sewage	REACH Registration Dossier
						OECD Guideline 203
						OECD Guideline 201
						OECD Guideline 202
						Toxicity test was conducted by a standar
						OECD Guideline 209

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

BCF

CAS No	Chemical name	BCF	Species	Source
1305-78-8	calcium oxide	21,09	Lolium perenne cv Nui	Communications in So

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 10 of 11

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Marine transport (IMDG)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1910

14.2. UN proper shipping name: CALCIUM OXIDE

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8

Special Provisions: A803

Limited quantity Passenger: 5 kg

Passenger LQ: Y845

Excepted quantity: E1

IATA-packing instructions - Passenger: 860

IATA-max. quantity - Passenger: 25 kg

IATA-packing instructions - Cargo: 864

IATA-max. quantity - Cargo: 100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 9,11,12.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Calcium oxide pure fine powder

Revision date: 13.07.2023

Product code: 24550

Page 11 of 11

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
Skin Irrit: Skin irritation
Eye Dam: Eye damage
STOT SE: Specific target organ toxicity - single exposure

Relevant H and EUH statements (number and full text)

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

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.