MATERIAL SAFETY DATA SHEET

Kristallkalk

Prepared in accordance REACH Regulation (EC) 1907/ 2006, amended by Regulation (EU) 2020/878

Version: 1.0 / EN
Revision date: March 2022

SECTION1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Substance name:	Calcium carbonate (synthetic)
Synonyms:	PCC, Precipitated Calcium Carbonate
Trade names:	Kristallkalk
EC Number:	207-439-9
REACH Registration Number:	01-2119486795-18-0258
CAS Number:	471-34-1

1.2 Relevant identified uses of the substance and uses advised against

Use of the substance:
Additives in paper; paints and surface coatings; plastics, rubbers and elastomers; adhesives; mastics, sealants and plasters; fertilisers and soil conditioners; animal feeds; foodstuffs; pharmaceuticals; toiletries and personal care products; cleaning products; glass and ceramics; water treatment chemicals; a carrier for insecticides and herbicides; intermediate in the recovery of cooking chemicals in kraft and soda pulping; building materials; Desulphurisation of industrial flue gases.

1.2.1 Relevant identified uses

Industrial, professional and private use

1.2.2 Uses advised against

No use identified in Section 1.2 is advised against

1.3 Details of the supplier of the Safety Data Sheet

Name:	Calmit GmbH
Address:	Linzer Straße 8, 4820 Bad Ischl, AUSTRIA

Phone N°:	+43 501 888 40
Fax N°:	+43
E-mail of competent person responsible for SDS:	office@calmit.at

1.4 Emergency telephone number

European Emergency N°:	112
'National Poison Centre telephone N°:	See national emergency telephone numbers at http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks
Emergency telephone at the company	+43 664 969 8989
Available outside office hours:	☐ Yes ☒ No

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Not classified as hazardous according to Regulation (EC) No 1272/2008.

2.2 Label elements

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

Not labelled according to Regulation (EC) No 1272/2008 [CLP].

2.3 Other hazards

No other hazards identified.

The substance does not meet the criteria for PBT or vPvB substance according to Regulation (EC) No 1907/2006, Annex XIII.

Calcium carbonate is not included in the Candidate List of substances of very high concern for Authorisation.

Calcium carbonate is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Main constituent

CAS Number	EC Number	Identification name	Purity (weight %)	Classification according to Regulation (EC) No 1272/2008 [CLP]
471-34-1	207-439-9	Calcium carbonate	>98,5 %	Not classified No M Factor assigned No SCL assigned
Hazardous impurities: No relevant impurities for classification and labelling				

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes
No known delayed effects. Consult a physician for all exposures except for minor instances.

Following inhalation
Move patient from contaminated area to fresh air. If symptoms persist, call a physician.

Following skin contact:
Remove contaminated clothing. Wash off under tap water for at least 1 minute. Get medical attention if symptoms appear.

Following eye contact:

Rinse under tap water for at least 1 minute, also under the eyelids. If eye irritation persists, consult a specialist.

Following ingestion:
Rinse mouth thoroughly with water. Immediately give large quantities of water to drink. If symptoms persist, call a physician.

Self-protection of the first aider:
No special precautions required.

4.2 Most important symptoms and effects, both acute and delayed

No specific symptoms or effects have been reported

4.3 Indication of any immediate medical attention and special treatment needed

No need for immediate medical attention; follow the advices given in section 4.1.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:
The product itself does not burn. No special protective measures against fire required.

Unsuitable extinguishing media:
None

5.2 Special hazards arising from the substance

Asphyxiating gases/ vapours/ fumes of carbon dioxide at temperature > 600 °C.

5.3 Advice for fire-fighters:

No special precautions required

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Use personal protective equipment:
Respiratory protection: In case of dust, dust mask type FFP1, FFP2 or FFP3 (European Norm 143)
Avoid dust formation. Do not breathe dust. (see section 8)

6.1.2. For emergency responders

Use personal protective equipment:
Respiratory protection: In case of dust, dust mask type FFP1, FFP2 or FFP3 (European Norm 143)
Avoid dust formation. Do not breathe dust. (see section 8)

6.2 Environmental precautions

No special environmental measures are necessary.

6.3 Methods and material for containment and cleaning up

- Pick up and arrange disposal without creating dust.
- Dam and absorb spillage with sand, sawdust or other absorbent material
- Keep in properly labelled containers.
- Keep container closed.
- Treat recovered material as described in the section "Disposal considerations".
- Flush with plenty of water.
- Keep away from acids

6.4 Reference to other sections

For more information on exposure controls/personal protection or disposal considerations, please refer to sections 8 and 13 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures

Do not breathe dust.
Avoid dust formation.
Avoid contact with skin, eyes and clothing.
Use only in well-ventilated areas.
Keep away from incompatible products.
(see section 10)

7.1.2 Advice on general occupational hygiene

Handle in accordance with good industrial hygiene and safety practice.
Do not eat, drink and smoke in work areas
Wash hands after use
Remove contaminated clothing and protective equipment before entering eating areas.
Do not remove contaminated clothing from the workplace

7.2 Conditions for safe storage, including any incompatibilities

- Keep in a dry place.
- Keep in covered storage tank.
- Keep container closed.

7.3 Specific end use(s)

If you require advice on specific uses, please contact your supplier.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

Air limit values:

Maintain personal exposure below occupational exposure limit for dust (inhalable and respirable) as dictated in the national legislation.

Occupational Exposure Limits in mg/m³ 8 hours TWA dust

Member State	Non specified (inert) dust **INHALABLE**	Non specified (inert) dust **RESPIRABLE**
Austria	10	5
Belgium	10	3
Bulgaria		4
Denmark	10	5
Finland	10	
France	10	5
Germany	10	1.5
Greece	10	5
Ireland	10	4
Italy	10	3
Lithuania		10
Luxembourg	10	6
Netherlands	10	5
Norway	10	5
Poland	10	
Portugal	10	5
Romania		10
Slovakia	10	
Spain	10	3
Sweden		5
Switzerland		6
UK	10	4

Biological limit values:
None

8.1.2 Recommended monitoring procedures:

None

8.1.3 Occupational exposure limits and/or biological limits for air contaminants:

Not applicable

8.1.4 DNEL / DMEL and PNEC-values:

DNELs:

	Workers			
Route of exposure	**Acute effect local**	**Acute effects systemic**	**Chronic effects local**	**Chronic effects systemic**
Oral	Not required			
Inhalation	No hazard identified	No hazard identified	4,26 mg/m³	10 mg/m³
Dermal	No hazard identified			

	Consumers			
Route of exposure	**Acute effect local**	**Acute effects systemic**	**Chronic effects local**	**Chronic effects systemic**
Oral	No hazard identified			
Inhalation	No hazard identified	No hazard identified	1,06 mg/m³	10 mg / m³
Dermal	No hazard identified			

PNECs:

Environment protection target	**PNEC**	**Remarks**
Freshwater	No hazard identified	Not acutely toxic to fish, invertebrates, algae and microorganisms at the concentrations tested in the studies. Acute toxicity to fish, invertebrates, algae and microorganisms is greater than the highest concentration tested and therefore exceeds the maximum solubility of calcium carbonate in water.
Freshwater sediments	No hazard identified	Calcium carbonate and calcium and carbonate ions are ubiquitous in the environment and are found naturally in soil, water and sediment. Sediments naturally contain a high concentration of calcium and carbonate due to the physical and/or chemical weathering of calcium-rich rocks that takes place in the environment. Calcium will be assimilated by species residing in the sediment and is necessary to maintain a good chemical balance in soils, water and sediment. The

		carbonate will become part of the carbon cycle and is then cycled throughout the biosphere. Due to the natural occurrence of calcium carbonate in the environment, it is expected that calcium carbonate would not be toxic to sediment organisms.
Marine water	No hazard identified	Calcium carbonate is not acutely toxic to fish, invertebrates, algae and microorganisms at the concentrations tested in the studies on freshwater species. Using weight of evidence approaches, the concentration of calcium carbonate that might cause acute toxicity to fish, invertebrates, algae and microorganisms is greater than the highest concentration tested and therefore exceeds the maximum solubility of calcium carbonate in water. Therefore, calcium carbonate showed no short-term toxicity to aquatic species and is not acutely toxic to fish, invertebrates, algae and microorganisms at the limit of its water solubility.
Marine sediments	No hazard identified	Calcium carbonate and calcium and carbonate ions are ubiquitous in the environment and are found naturally in soil, water and sediment. Sediments naturally contain a high concentration of calcium and carbonate due to the physical and/or chemical weathering of calcium-rich rocks that takes place in the environment. Calcium will be assimilated by species residing in the sediment and is necessary to maintain a good chemical balance in soils, water and sediment. The carbonate will become part of the carbon cycle and is then cycled throughout the biosphere. Due to the natural occurrence of calcium carbonate in the environment, it is expected that calcium carbonate would not be toxic to sediment organisms.
Food chain (bioaccumulation)	No hazard identified	In the environment, calcium carbonate dissociates into calcium and carbonate ions, which are naturally ubiquitous in the environment; calcium will be assimilated by species present in the water, soil or sediment and is necessary to maintain a good chemical balance in the environment, and carbonate will become part of the carbon cycle. Therefore, bioaccumulation is not expected.
Microorganisms in sewage treatment	100 mg/L	NOEC ; AF=10
Soil (agricultural)	No hazard identified	Not acutely toxic to earthworms, plants (soya, tomato and oat) and soil microorganisms at the concentrations tested in the studies. Acute toxicity to earthworms, plants and soil microorganisms is greater than the highest concentrations tested and therefore exceeds the maximum solubility of calcium carbonate in water.
Air	No hazard identified	

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

8.2.2 Individual protection measures such as personal protective equipment:

8.2.2.1 Eye/face protection

Safety spectacles or chemical resistant goggles must be worn.

8.2.2.2 Skin and hand protection

For hands, wear protective gloves (PVC, Neoprene, Natural Rubber)
For skin, wear protective suit, such as overalls / work clothes for routine handling

8.2.2.3 Respiratory protection

Local ventilation to control airborne dust levels levels below occupational exposure limits is recommended.

In case of prolonged exposure to airborne dust concentrations, wear a respiratory protective equipment that complies with the requirements of European or national legislation. The use of half or full-face masks with filters against particles of category 2 or 3 (FP2 – FP3) is recommended. See EN 143:2000 – Respiratory protective devices. Particle filters..

8.2.2.4 Thermal hazards

The substance does not represent a thermal hazard, thus special consideration is not required.

8.2.3 Environmental exposure controls:

Dispose of rinse water in accordance with local and national regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

a. Physical state: white fine powder
b. Colour: white
c. Odour: odourless
d. Melting point: > 450 °C (handbook data)
e. Boiling point: not applicable (solid with a melting point > 450 °C)
f. Flammability: non flammable
g. Explosionon limits: not applicable to solids
h. Flash point: not applicable (inorganic solid with a melting point > 450 °C)
i. Auto ignition temperature: not applicable to solids
j. Decomposition temperature: Decomposes at temperatures > 450 °C
k. pH: 9.5 – 10.5 (saturated solution – 20° C)
l. Viscosity: not applicable (solid with a melting point > 450 °C)
m. Solubility in water: 0.0166 g/L at 20°C (study result, OECD 105 method)
n. Partition coefficient n-octanol/water not applicable (inorganic substance)
o. Vapour pressure: not applicable (solid with a melting point > 450 °C)
p. Relative density: 2.7-2.95 g/cm³ at 20°C (handbook data)
q. Vapour density: not applicable
r. Particle characteristics: mean particle size (d50): 1.2 – 2.2 µm (v/w) by laser diffraction

9.2 Other information:

None

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Stable under recommended storage conditions.

10.2 Chemical stability:

Contact with acids or strong heating liberates carbon dioxide, sometimes violently.

10.3 Possibility of hazardous reactions:

Contact with acids liberates carbon dioxide, sometimes violently.

10.4 Conditions to avoid:

Will produce carbon dioxide on strong heating or on contact with acids.

10.5 Incompatible materials:

Acids

10.6 Hazardous decomposition products:

Reacts with acids to form carbon dioxide which displaces the oxygen in the air in closed spaces.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Toxicity endpoints	Outcome of the effects assessment
Acute toxicity	Calcium carbonate is not acutely toxic. Oral LD_{50} > 2000 mg/kg bw (*in vivo,* OECD 420, rat) Dermal LD_{50} > 2000 mg/kg bw (*in vivo,* OECD 402, rat) Inhalation LC_{50} (4h) > 3 mg/L air (OECD 403, rat) Based on available data, the classification criteria are not met
Skin corrosion/irritation	Calcium carbonate is not irritating to skin (*in vivo*, OECD 404, rabbit). Based on available data, the classification criteria are not met
Serious eye damage/irritation	Calcium carbonate is not irritating to eye (*in vivo*, OECD 405, rabbit). Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	Calcium carbonate is not a skin sensitiser in accordance with the local lymph node assay (OECD 429, mouse) Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Calcium carbonate is not genotoxic (*in vitro*, OECD 471, OECD 473, OECD 476) Based on available data, the classification criteria are not met.
Carcinogenicity	Calcium carbonate is not expected to pose a risk of carcinogenicity based on evidence from genotoxicity, repeat dose studies and long-term human studies. Based on available data, the classification criteria are not met.
Reproductive toxicity	Calcium carbonate is not toxic to reproduction. NOEL (Parental) 1000 mg/kg bw/day (*in vivo,* OECD 422, rat) Based on available data, the classification criteria are not met.

Toxicity endpoints	Outcome of the effects assessment
STOT Single exposure	No organ toxicity observed in acute tests. Based on available data, the classification criteria are not met
STOT Repeated exposure	No organ toxicity observed in repeated dose toxicity tests Oral NOAEL: 1000 mg/kg bw/day (*in vivo* OECD 422, rat) Inhalation NOAEC: 0.212 mg/L (*in vivo,* OECD 413, rat). Dermal Toxicity via the dermal route is not considered as relevant. Although skin contact during production and use of calcium carbonate is possible, inhalation is expected to be the primary route of exposure. Calcium carbonate is an inorganic ionic solid and based on its physicochemical properties, the results of acute toxicity oral and dermal studies, as well as a 28-day repeat dose oral toxicity study, calcium carbonate is not expected to cause any toxic effects following repeated dermal exposure. Based on available data, the classification criteria for toxicity upon prolonged exposure by oral route, by dermal route or inhalation route are not met.
Aspiration hazard	No aspiration hazard envisaged

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Available data for the substance have been considered against the criteria laid down in Regulations ((EC) No 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to apply

11.2.2 Other information

None

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

12.1.1 Acute/Prolonged toxicity to fish

LC_{50} (96h) for freshwater fish (rainbow trout *Oncorhynchus mykiss*): >100% v/v saturated solution of test material - Exceeds maximum solubility of substance (Method OECD 203)

12.1.2 Acute/Prolonged toxicity to aquatic invertebrates

EC_{50} (48h) for aquatic invertebrates (*Daphnia magna*): >100% v/v saturated solution of test material - Exceeds maximum solubility of substance (Method OECD 202)

12.1.3 Acute/Prolonged toxicity to algae/aquatic plants

EC_{50} /EC_{20}/EC_{10} or NOEC (72h) for freshwater algae *(Desmodesmus subspicatus)*: > 14 mg/L (Method OECD 201)

12.1.4 Toxicity to micro-organisms e.g. bacteria

EC50 (3h) activated sewage sludge: > 1000 mg/L (Method OECD 209)
NOEC (3h) activated sewage sludge: 1000 mg/L (Method OECD 209)

12.1.5 Chronic toxicity to aquatic organisms

Not relevant

12.1.6 Toxicity to soil dwelling organisms

EC_{50} (14 day) for soil macroorganisms (earthworms *Eisenia fetida):* > 1000 mg/kg (Method OECD 207)
NOEC (14 day) for soil macroorganisms (earthworms *Eisenia fetida):* 1000 mg/L (Method OECD 207)
EC_{50} (28 day) for soil microorganisms: >1000 mg/kg (Method OECD 216)
NOEC (28 day) for soil microorganisms: 1000 mg/kg (Method OECD 216
Calcium carbonate is not toxic to soil dwelling organisms

12.1.7 Toxicity to terrestrial plants

EC_{50} (21 day) *glycine max* (soybean), *lycopersicon esculentum* (tomato), *avena sativa* (oats): > 1000 mg/kg (Method OECD 208)
NOEC (21 day) *glycine max* (soybean), *lycopersicon esculentum* (tomato), *avena sativa* (oats): 1000 mg/kg (Method OECD 208)
Calcium carbonate is not acutely toxic to plants

12.1.8 General effect

No specific adverse effects known

12.2 Persistence and degradability

Abiotic Degradation:
The substance is inorganic and therefore will not undergo abiotic degradation.

Biodegradation:
The substance is inorganic and therefore will not undergo biodegradation.

12.3 Bioaccumulative potential

Bioaccumulation is not expected.

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment:

This substance does not meet the criteria for classification as PBT or vPvB.

12.6 Endocrine disrupting properties:

Available data for the substance have been considered against the criteria laid down in Regulations ((EC) No 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to a*pply.*

12.7 Other adverse effects:

According to the criteria of the European classification and labelling system, the substance does not require classification as hazardous for the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Waste codes / waste designations according to List of Wastes (LoW) Code:
Waste codes may be specified by the user based on the application for which the substance is used.
Individual information

- Wastes should be handled in accordance with local and national regulations.
- Wastes can be landfilled when in compliance with local regulations.

- Dispose of waste in accordance with the European Directives.

Packaging treatment:
- Empty containers.
- Dispose of as unused product.
- The empty and clean containers are to be reused in conformity with regulations.

SECTION 14. TRANSPORT INFORMATION

The material is not classified as a dangerous substance and no restrictions apply for land/sea/air transportation. Avoid dust spreading

14.1 UN-Number or ID number

Not relevant. No UN-number.

14.2 UN proper shipping name

Not relevant

14.3 Transport hazard class(es)

ADR:	Not classified
IMDG:	Not classified
ICAO/IATA:	Not classified
RID:	Not classified

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not relevant

14.6 Special precautions for user

Avoid any release of dust during transportation, by using air-tight tanks for powders and covered trucks for pebbles.

14.7 Maritime transport in bulk according to IMO instruments

IMSBC Code:
Bulk cargo shipping name (BCSN): Not applicable for the delivery form of the product

Harmful to the marine environment (HME): No.
Material hazardous only in bulk (MHB): Not applicable.
Cargo group: Not applicable for the delivery form of the product

SECTION 15. REGULATORY INFORMATION

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

Labelling (Regulation (EC) No 1272/2008:

The substance is not labelled according to EU legislation.

National legislation – Germany:

German storage class: 13 – Non combustible solids
Waste contaminating class: Not water endangering

15.2 Chemical safety assessment

Calcium carbonate (natural) is exempted from REACH registration and thus no formal chemical safety assessment has been carried out for this substance by the supplier. However, calcium carbonate (precipitated) is regarded as the same substance as calcium carbonate natural) and calcium carbonate (precipitated) has been registered. Data from registration dossiers are disseminated on ECHA website (www.echa.europe.eu) .

SECTION 16. OTHER INFORMATION

16.1 Indication of changes:

The SDS has been revised to comply with Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of REACH.

16.2 Abbreviations and acronyms:

AF =	Assessment factor

BCF =	Bioconcentration factor
DMEL =	Derived maximum effect level
DNEL =	Derived no effect level
EC50 =	Median effect concentration
LC50 =	Median lethal concentration
LD50 =	Medial lethal dose
NOAEC	No observed adverse effect concentration
NOAEL =	No observed adverse effect level
NOEC =	No observed effect concentration
NOEL =	No observed effect level
OEL =	Operator exposure level
PBT	Persistent bioaccumulative toxic
PEC =	Predicted effect level
PNEC =	Predicted no effect level
SDS =	Safety data sheet
STOT =	Specific target organ toxicity
STP =	Sewage treatment plant
vPvB	Very persistent very bioaccumulative

16.3 Key literature references and sources for data

For any information on literature references or toxicity and ecotoxicity studies, please contact office@eurominerals.es

16.4 Relevant H- and P-phrases (number and full text)

Not applicable

16.5 Training advice:

Not applicable

16.6 Further information:

This SDS has been prepared in accordance with Regulation (EC) 1907/ 2006 as amended by Regulation (EU) 2020/878 .

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a

warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.