SAFETY DATA SHEET

Nordkalk Milk of Lime

The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	15.05.2014
Revision date	22.12.2022

1.1. Product identifier

Product name	Nordkalk Milk of Lime
Synonyms	Mixture of calcium dihydroxide and water

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

Use of the substance / mixture	Building material industry, Chemical industry, Agriculture, Biocidal use, Environmental protection (e.g. flue gas treatment, waste water treatment, sludge treatment), Drinking water treatment, Feed, food and pharmaceutical industry, Civil engineering, Paper and paint industry.
Main intended use	PC-TEC-OTH Other products for chemical or technical processes

1.3. Details of the supplier of the safety data sheet

Company name	Nordkalk Oy Ab
Postal address	Skräbbölevägen 18
Postcode	FI-21600
City	Pargas
Country	Finland
Telephone number	+358 20 753 7000
Email	sds@nordkalk.com
Website	www.nordkalk.com

1.4. Emergency telephone number

Emergency telephone	Telephone number: 112 Description: Emergency telephone number (in Finland) Open 24 hours a day.

	Telephone number: +358 800 147 111 or +358 9 471 977 Description: Poison Information Centre (in Finland), P.O. Box 790 (Tukholmankatu 17), 00029 HUS Open 24 hours a day.
Identification, comments	Please contact the Emergency Centre in your own country, e.g. 112 in European Union countries.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335

2.2. Label elements

Hazard pictograms (CLP)

Composition on the label	Calcium dihydroxide
Signal word	Danger
Hazard statements	H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.
Precautionary statements	P102 Keep out of reach of children. P261 Avoid breathing dust/spray. P280 Wear protective gloves / protective clothing / eye protection / face protection. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor / physician. P501 Dispose of contents / container in accordance with local regulation.

2.3. Other hazards

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

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Calcium dihydroxide	CAS No.: 1305-62-0 EC No.: 215-137-3 REACH Reg. No.: 01-2119475151-45-XXXX	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335	10 - 60 %	

Description of the mixture Mixture of calcium dihydroxide and water.

Substance comments The full text for all hazard statements are displayed in point 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General If the situation is unclear or symptoms persist, seek medical attention.

Inhalation Move exposed person immediately to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin contact Wash contaminated skin with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or other symptoms persist, seek medical attention.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes, holding eyelids open. Remove contact lenses, if present and easy to do, and continue rinsing. Get medical advice/attention.

Ingestion Do not induce vomiting. Rinse the mouth and give 1-2 glasses of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

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

Acute symptoms and effects Causes skin irritation. May irritate airways. Risk of serious eye damage.

Delayed symptoms and effects None known.

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

Other information Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Dry chemical, carbon dioxide or foam. Use an extinguishing agent suitable for the surrounding fire.

Improper extinguishing media None known.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards The product is non-combustible. No specific hazards.

Hazardous combustion products No hazardous combustion products known.

5.3. Advice for firefighters

Personal protective equipment Wear appropriate protective equipment and self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures Ensure adequate ventilation. Keep unnecessary and unprotected people from entering. Stop leak if safe to do so.

Personal protection measures Wear appropriate personal protective equipment. Avoid contact with skin or eyes. Avoid breathing mist or spray.

6.2. Environmental precautions

Environmental precautionary measures Prevent spreading over great surfaces (e.g. by damming or installing oil booms). Avoid release into drains, sewers or waterways. In case of environmental contamination, inform local authorities.

6.3. Methods and material for containment and cleaning up

Containment Contain spillages with sand or earth. Avoid the formation of aerosol or mist.

Clean up Pick up and collect in a suitable container for disposal. Pick up mechanically.

6.4. Reference to other sections

Other instructions Safe handling: see point 7.
Personal protective equipment: see point 8.
Waste disposal: see point 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling Avoid contact with skin or eyes. Avoid breathing mist or spray. Wear appropriate personal protective equipment. Avoid the formation of aerosol or mist. Ensure adequate ventilation (use process enclosures or local exhaust ventilation if necessary). Do not wear contact lenses when handling this product. Eyewash facilities must be available when handling this product.

Protective safety measures

Preventitive measures to prevent aerosol and dust generation	Prevent formation of aerosols.
Advice on general occupational hygiene	Handle in accordance with good industrial hygiene and safety practices. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash hands and exposed skin areas before breaks and at the end of workday. Take off contaminated clothing immediately and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Store in a closed container. Keep out of reach of children.
Conditions to avoid	For incompatible materials see point 10.5.

Conditions for safe storage

Technical measures and storage conditions	Store in a well-ventilated area.
Packaging compatibilities	Unsuitable packaging materials and coatings: Aluminium.

7.3. Specific end use(s)

Specific use(s)	See the identified uses in table 1 of the Appendix of this SDS.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Calcium dihydroxide	CAS No.: 1305-62-0	Country of origin: United Kingdom Limit value (8 h) : 5 mg/m³ Country of origin: United Kingdom Limit value (8 h) : 1 mg/m³ **Limit value (short term)** Value: 4 mg/m³ Comments: Respirable fraction Country of origin: European Union Limit value (8 h) : 5 mg/m³ Source: Directive 91/322/EEC Comments: IOELV Country of origin: European Union Limit value (8 h) : 1 mg/m³ **Limit value (short term)** Value: 4 mg/m³	

Source: Directive (EU) 2017/164
Comments: IOELV
Particle fraction: Respirable
Country of origin: Finland
Limit value (8 h) : 1 mg/m³
Limit value (short term)
Value: 4 mg/m³

DNEL / PNEC

Substance	Calcium dihydroxide
DNEL	**Group:** Professional **Route of exposure:** Acute inhalation (local) **Value:** 4 mg/m³ **Comments:** respirable dust **Group:** Professional **Route of exposure:** Long-term inhalation (local) **Value:** 1 mg/m³ **Comments:** respirable dust **Group:** Consumer **Route of exposure:** Acute inhalation (local) **Value:** 4 mg/m³ **Comments:** respirable dust **Group:** Consumer **Route of exposure:** Long-term inhalation (local) **Value:** 1 mg/m³ **Comments:** respirable dust
PNEC	**Route of exposure:** Freshwater **Value:** 0,49 mg/l **Route of exposure:** Saltwater **Value:** 0,32 mg/l **Route of exposure:** Sewage treatment plant STP **Value:** 3 mg/l **Route of exposure:** Soil **Value:** 1080 mg/kg

8.2. Exposure controls

Precautionary measures to prevent exposure

Technical measures to prevent exposure	Handle the product in closed systems or provide sufficient ventilation. Use local exhaust ventilation if necessary. Avoid the formation of aerosol or mist. Emergency eyewash equipment must be available at workplace.

Eye / face protection

Suitable eye protection	Use tight-fitting safety goggles. (EN 166:2001)
Eye protection, comments	Do not wear contact lenses when handling this product. It is advisable to have individual pocket eyewash. Appropriate for alkali chemicals.

Hand protection

Suitable gloves type	Use appropriate chemical-resistant, impervious gloves. (EN ISO 374-1:2018, type A or B)
Suitable materials	Nitrile rubber.

Skin protection

Suitable protective clothing	Wear appropriate chemical-resistant, impervious protective clothing. Wear appropriate protective footwear.
Additional skin protection measures	Wash contaminated skin after exposure. Remove contaminated clothing and shoes and wash/clean them before reuse.

Respiratory protection

Respiratory protection necessary at	If it is not possible to reduce exposure levels to below exposure limit values by ventilation, use appropriate respirator.
Recommended type of equipment	Particle filter mask. (FFP1/FFP2/FFP3)
Respiratory protection, comments	See the relevant exposure scenario in the Appendix.

Thermal hazards

Thermal hazards	Not relevant.

Appropriate environmental exposure control

Environmental exposure controls	Prevent entry into sewers or the environment.
Environmental exposure controls, comments	See the relevant exposure scenario in the Appendix.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Fluid. Suspension.
Colour	White. Light brown. Beige.
Odour	Odourless.
Odour limit	Comments: Not relevant.
pH	Status: In aqueous solution Value: 12,4 Temperature: 20 °C
Melting point / melting range	Value: 0 °C Comments: Water

Boiling point / boiling range	Value: 100 °C Comments: Water
Flash point	Comments: Not applicable.
Flammability	Not flammable. (EU A.10)
Explosion limit	Comments: Not applicable.
Vapour pressure	Value: 2,3 kPa
Vapour density	Value: 0,62
Particle characteristics	Comments: Not determined.
Density	Value: 1,06 - 1,38 g/ml
Solubility	Medium: Water Value: 1844,9 mg/l Method: EU A.6
Partition coefficient: n-octanol/ water	Comments: Not applicable.
Auto-ignition temperature	Method: EU A.16 Comments: Not self-igniting.
Decomposition temperature	Value: > 450 °C
Viscosity	Comments: Not determined.

9.2. Other information

9.2.2. Other safety characteristics

Comments	None reported.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Calcium dihydroxide: Dissociates in aqueous media.

10.2. Chemical stability

Stability	Chemically stable under normal storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reacts exothermically with acids (releasing heat).

10.4. Conditions to avoid

Conditions to avoid	None known.

10.5. Incompatible materials

Materials to avoid	Acids. Aluminium. Brass. In the presence of moisture produces hydrogen which may

cause risk of explosion.

10.6. Hazardous decomposition products

Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: Toxicological information

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

Substance	Calcium dihydroxide
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Method:** OECD 425 **Value:** > 2000 mg/kg bw **Animal test species:** Rat **Effect tested:** LD50 **Route of exposure:** Dermal **Method:** OECD 402 **Value:** > 2500 mg/kg bw **Animal test species:** Rabbit
Other toxicological data	The product is not classified as acutely toxic.

Other information regarding health hazards

Substance	Calcium dihydroxide
Skin corrosion / irritation test result	**Toxicity type:** Skin irritation **Method:** In vivo **Species:** Rabbit **Evaluation result:** Irritating. **Toxicity type:** Skin corrosion **Method:** In vitro OECD 431 **Evaluation result:** Not corrosive.
Assessment of skin corrosion / irritation, classification	Causes skin irritation.
Substance	Calcium dihydroxide
Eye damage or irritation, test results	**Toxicity type:** Eye damage **Method:** In vivo **Species:** Rabbit **Evaluation result:** Causes serious eye damage
Assessment of eye damage or irritation, classification	Causes serious eye damage.
Sensitisation	The product is not classified as a respiratory or skin sensitiser.
Mutagenicity	The product is not classified as a mutagen. (In vitro, OECD 471, 473, 476 read across)
Carcinogenicity, other information	The product is not classified as a carcinogen.

Reproductive toxicity	The product is not classified as toxic to reproduction.
Assessment of specific target organ toxicity - single exposure, classification	May cause respiratory irritation.
Assessment of specific target organ toxicity - repeated exposure, classification	The product is not classified as toxic to specific target organs at repeated exposure.
Assessment of aspiration hazard, classification	The product is not classified as an aspiration hazard.

Symptoms of exposure

In case of ingestion	Irritates the gastrointestinal tract.

11.2 Other information

Endocrine disruption	Ingredients: no endocrine disrupting properties reported.
Other information	No other health effects reported.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Calcium dihydroxide
Aquatic toxicity, fish	**Value:** 50,6 mg/l **Effect dose concentration:** LC50 **Test duration:** 96 hour(s) **Species:** freshwater fish **Value:** 457 mg/l **Effect dose concentration:** LC50 **Test duration:** 96 hour(s) **Species:** marine water fish
Substance	Calcium dihydroxide
Aquatic toxicity, algae	**Value:** 184,57 mg/l **Effect dose concentration:** EC50 **Test duration:** 72 hour(s) **Species:** freshwater algae **Value:** 48 mg/l **Effect dose concentration:** NOEC **Test duration:** 72 hour(s) **Species:** freshwater algae
Substance	Calcium dihydroxide
Aquatic toxicity, crustacean	**Toxicity type:** Chronic **Value:** 32 mg/l **Effect dose concentration:** NOEC **Test duration:** 14 day(s) **Species:** marine water invertebrates

	Value: 49,1 mg/l **Effect dose concentration:** EC50 **Test duration:** 48 hour(s) **Species:** freshwater invertebrates **Value:** 158 mg/l **Effect dose concentration:** LC50 **Test duration:** 96 hour(s) **Species:** marine water invertebrates
Substance	Calcium dihydroxide
Toxicity to earthworm	**Value:** 2000 mg/kg **Species:** macro organisms **Method:** soil dry weight
Substance	Calcium dihydroxide
Toxicity to soil microorganisms	**Value:** 12000 mg/kg **Species:** microorganisms **Method:** soil dry weight
Plant toxicity	Value: 1080 mg/kg Effect dose concentration: NOEC Test duration: 21 day(s) Comments: calcium dihydroxide
Impact on sewage treatment	Comments: At high concentration, through the rise of temperature and pH, the product is used for disinfection of sewage sludges.
Ecotoxicity	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	Not relevant for inorganic substances.

12.3. Bioaccumulative potential

Bioaccumulation, evaluation	Not relevant for inorganic substances.

12.4. Mobility in soil

Mobility	Calcium dihydroxide: The product is sparingly soluble, presents a low mobility in most soils.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	Not relevant for inorganic substances.

12.6. Endocrine disrupting properties

Endocrine disrupting properties	Ingredients: no endocrine disrupting properties reported.

12.7. Other adverse effects

Additional ecological information	The product is not classified as hazardous to the environment. Prevent entry into drains, sewers, waterways or soil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Avoid release to the environment.
Appropriate methods of disposal for the contaminated packaging	The used packaging is only meant for packing this product; it should not be reused for other purposes. After usage, empty the packing completely.
Other information	Processing, use or contamination of this product may change the waste management options. Dispose of in compliance with local and national regulations.

SECTION 14: Transport information

Dangerous goods	No

14.1. UN number

Comments	The product is not classified for transportation.

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

IMDG Marine pollutant	No
Comments	The product is not classified as hazardous to the environment.

14.6. Special precautions for user

Special safety precautions for user	Prevent entry into sewers, waterways and soil. Avoid the formation of aerosol or mist.

14.7. Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

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

Legislation and regulations	No specific regulations.

15.2. Chemical safety assessment

Chemical safety assessment performed	Yes

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.
Training advice	Read safety data sheet.
Key literature references and sources for data	Previous version of the SDS 25.02.2019 EULA Safety Data Sheet for Calcium dihydroxide (v. 4.0/EN, December 2020) EH40/2005 Workplace exposure limits (4th ed, 2020) Decree on Concentrations known to be Hazardous 654/2020 (HTP-arvot 2020), Finland
Abbreviations and acronyms used	DNEL: Derived No-Effect Level EC50: Effective concentration: concentration which kills or immobilises 50 % of exposed organisms LC50: Lethal concentration 50 % (median lethal concentration): concentration which kills 50 % of exposed organisms LD50: Lethal dose 50 % (median lethal dose): dose which kills 50 % of exposed organisms NOEC: No Observed Effect Concentration: concentration at which no effects are observed OEL: Occupational exposure limit PNEC: Predicted No-Effect Concentration STEL: Short-term exposure limit. TWA: Time-weighted average
Information added, deleted or revised	25.2.2019: The following sections have been revised: 1.3 Contact information 2. Classification of the mixture 7.4. Conditions to avoid 8.1. Control parameters 14. Transport information 15.1 Safety, health and environmental regulations/legislation specific for the substance 16 Other information 22.12.2022: Update according to Annex II of the REACH Regulation ([EU] 2020/878). Added exposure limit values (section 8.1). Change to sections: 2.2, 2.3, 5.1, 7.1, 8.1, 8.2, 9.1, 10.1, 10.5, 12.4, 13.1, 14.5, 16
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Comments	Disclaimer This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use,

handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.