

NovaClay



SAFETY DATA SHEET

NovaClay

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

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

1.1. Product identifier

Product name NovaClay

Substance form Calcined clay powder

EU REACH registration notes Exempted in accordance with REACH Annex V.7

CAS/EC number?

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

Identified uses A functional additive

Uses advised against None

1.3. Details of the supplier of the safety data sheet

Supplier/Manufacturer

NovaClay A/S

Viborg Landevej 1

9500 Hobro

Denmark

info@novaclay.dk

Tlf.: +45 25509115

Contact person Please approach your usual NovaClay contact in the first instance.

1.4. Emergency telephone number

Emergency telephone CHEMTREC +1 703-741-5970

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Human health

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This product does not meet the criteria for classification as hazardous as defined in the Regulation EC 1272/2008. Depending on the type of handling and use (e.g. grinding, drying), airborne respirable crystalline silica may be generated. Prolonged and/or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable crystalline silica dust should be monitored and controlled.

Environmental The product is not expected to be hazardous to the environment.

Physicochemical

This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH. This product should be handled with care to avoid dust generation.

2.2. Label elements

Hazard statements NC Not Classified

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current UK criteria.

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.

SECTION 3: Composition/information on ingredients

3.1. Substances

Natural Clay, calcined powder

Classification Not Classified

The full text for all hazard statements is displayed in Section 16.

Product name NovaClay

EU REACH registration notes Exempted in accordance with REACH Annex V.7

Ingredient notes

This is a UVCB substance. This product does not contain any SVHC substances at levels greater than 0.1 % by weight.

Composition comments

This product contains less than 1% crystalline silica (fine fraction) consisting of cristobalite (fine fraction) and quartz

(fine fraction). Cristobalite: CAS-No.: 14464-46-1 EC No.: 238-455- 4. Quartz: CAS-No.:14808-60-7 EC No.: 238-878-4.

The classification of the product is shown in section 2 of this Safety Data Sheet.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information No acute and delayed symptoms and effects are observed.

Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion

Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.

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Skin contact

Wash skin thoroughly with soap and water. Use suitable lotion to moisturize skin.

Eye contact

Do not rub eye. Rinse with copious quantities of water and seek medical attention if irritation persists.

Protection of first aiders

For personal protection, see Section 8.

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

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

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

Notes for the doctor No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

This product is non-combustible. No specific extinguishing media is needed. Use fire extinguishing media appropriate for the surrounding materials.

Unsuitable extinguishing media No restriction on the extinguishing media to be use.

5.2. Special hazards arising from the substance or mixture

Specific hazards Non combustible. No hazardous thermal decomposition.

5.3. Advice for firefighters

Protective actions during firefighting

No specific fire-fighting protection is required. Use an extinguishing agent suitable for the surrounding materials. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid airborne dust generation, wear personal protective equipment in compliance with national legislation. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation.

Wear personal protective equipment in compliance with national legislation.

Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.

6.4. Reference to other sections

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Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting. If you require advice on safe handling techniques, please contact your supplier. Do not eat, drink and smoke in work areas; wash hands after use; remove contaminated clothing and protective equipment before entering eating areas. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.

For personal protection, see Section 8

Advice on general occupational hygiene

Keep dust levels to a minimum. Minimize dust generation. General occupational hygiene measures are required. These includes good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices). Shower and change clothes at the end of work shift. Change work clothes daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities.

Storage precautions

Store in a dry covered area. Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store product so as to prevent accidental bursting.

Avoid contact with the following materials: Hydrofluoric acid

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

A European Binding OEL (Occupational Exposure Limit) for respirable crystalline silica dust is set at 0.1 mg/m³ in the Directive (EU) 2017/2398, measured as an 8-hour TWA (Time Weighted Average).

Quartz

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³ respirable dust

Inorganic dust

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³ inhalable dust

Cristobalite

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³ respirable dust

WEL = Workplace Exposure Limit.

8.2. Exposure controls

Appropriate engineering control

Minimize airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep

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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 organizational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield. Contact lenses should not be worn when working with this product.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). Rubber (natural, latex).

Other skin and body protection

No specific requirement. Appropriate protection (e.g. protective clothing, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.

Hygiene measures

When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin.

Respiratory protection

Local ventilation to control airborne dust levels below occupational exposure limits is recommended. In case of exposure, where engineering controls are insufficient, the use of Respiratory Protective Equipment (RPE) is recommended. A risk assessment process must be followed to ensure adequate protection from the airborne dust. The type of RPE must suit the work situation and the specific requirements of the wearer. Other environmental conditions should also be considered. The minimum "Assigned Protection Factor" (APF) required will depend on the measured or predicted occupational exposure levels divided by the OEL detailed in section 8.1. Filters specified as FFP2 and P2 have an APF of 10. Correctly fitted, these would reduce the exposure to the wearer down to one tenth of the working atmosphere. Depending on the assessment of the exposure, a lesser or higher efficiency of filter may be required. The manufacturer's instructions and regulatory guidance regarding duration of use and correct fitting should be followed. The wearer of the selected RPE should receive training before use.

Environmental exposure controls

All ventilation systems should be filtered before discharge to atmosphere. Contain the spillage. Avoid releasing into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Powder

Colour Redish

Odour Odourless.

Odour threshold Not applicable.

pH 5,5 @ 10 % Slurry.

Melting point >450°C

Initial boiling point and range Not applicable (solid with a melting point >450°C)

Flash point Not applicable (solid with a melting point >450°C)

Evaporation rate Not applicable (solid with a melting point >450°C)

Flammability (solid, gas) Non flammable

Upper/lower flammability or explosive limits

Non explosive (void of any chemical structures commonly associated with explosive properties)

Vapour pressure Not applicable (Solid with a melting point >450°C)

Vapour density Not applicable (Solid with a melting point >450°C)

Relative density 2.58-2.78

Solubility(ies) Insoluble in water.

Partition coefficient Not applicable (inorganic substance)

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Auto-ignition temperature Not auto flammable

Decomposition Temperature Not applicable (solid with a melting point >450°C)

Viscosity Not applicable (solid with a melting point >450°C)

Explosive properties There are no chemical groups present in the product that are associated with explosive properties.

Oxidising properties There are no chemical groups present in the product that are associated with oxidising properties.

9.2. Other information

Other information No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Hydrofluoric acid

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

Silicon tetrafluoride (SiF₄) will form upon contact with hydrofluoric acid.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with the following materials: Hydrofluoric acid 10.5.

10.5. Incompatible materials

Materials to avoid Hydrofluoric acid

10.6. Hazardous decomposition products

Hazardous decomposition products

Silicon tetrafluoride (SiF₄) will form upon contact with hydrofluoric acid.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Inhalation Dust in high concentrations may irritate the respiratory system.

Ingestion No harmful effects expected from quantities likely to be ingested by accident.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Particles in the eyes may cause irritation and smarting.

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.

Other information None

Toxicological information on ingredients. Natural Clay calcined

Acute toxicity-oral

Notes (oral LD₅₀) No data available.

Acute toxicity-dermal

Notes (dermal LD₅₀) No data available.

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Serious eye damage/irritation

Summary No data available

Respiratory sensitisation

Summary No data available.

Skin sensitisation

Summary No data available.

Germ cell mutagenicity

Summary No data available.

Carcinogenicity

Summary

This product does not meet the criteria for classification as hazardous as defined in the Regulation EC 1272/2008.

Reproductive toxicity

Summary No data available.

Specific target organ toxicity - single exposure

Summary No data available.

Specific target organ toxicity - repeated exposure

Summary No data available.

Aspiration hazard

Summary No data available.

SECTION 12: Ecological information

Ecotoxicity

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity – fish Not known

Acute toxicity – aquatic invertebrates Not known

Acute toxicity – aquatic plants Not known

Ecological information on ingredients.

Natural Clay calcined

Acute toxicity – fish Not known

Acute toxicity – aquatic invertebrates Not known

Acute toxicity – aquatic plants Not known

12.2. Persistence and degradability

Persistence and degradability

The product is not biodegradable.

Ecological information on ingredients

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Natural Clay calcined

Persistence and degradability

The product is not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not applicable (inorganic substance)

Ecological information on ingredients

Natural Clay calcined

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not applicable (inorganic substance)

12.4. Mobility in soil

Mobility The product is insoluble in water.

Ecological information on ingredients

Natural Clay calcined

Mobility The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This substance is not classified as PBT or vPvB according to current UK criteria.

Ecological information on ingredients

Natural Clay calcined

Results of PBT and vPvB assessment

This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects None known.

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

This mineral can be disposed of as a non toxic/inactive material in approved landfill sites in accordance with local regulations. Dust formation from residues should be avoided and suitable worker protection assured.

Disposal methods

Where possible, recycling is preferable to disposal. Can be disposed of in compliance with local regulations.

SECTION 14: Transport information

General

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The product is not classified as a dangerous substance and no restrictions apply for land/sea/air transportation (IMDG, IATA, ADR/RID). Avoid generation and spreading of dust.

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable. Avoid any release of dust during transportation, by using air-tight tanks for powders and covered trucks for other dry forms.

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

No information required.

SECTION 15: Regulatory information

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

National regulations

EH40/2005 Workplace exposure limits. Health and Safety at Work etc. Act 1974 (as amended). The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

EU legislation Exempted in accordance with REACH Annex V.7

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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Abbreviations and acronyms used in the Safety Data Sheet

ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS = Chemical Abstracts Service C & L = Classification and labelling RCS = Respirable Crystalline Silica

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

LC50 = Median Lethal Concentration LD50 = Medial Lethal Dose

EC = European Commission

OEL = Occupational Exposure Limit

SDS = Safety Data Sheet

TWA = Time Weighted Average

REACH = European Regulation, Registration, Evaluation, Authorisation and Restriction of Chemicals

UVCB = Unknown or variable composition, complex reaction products or Biological materials

PBT = Persistent, Bioaccumulative and Toxic substance

vPvB = Very Persistent Very Bioaccumulative

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General information Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations. A multi-sectoral social dialogue agreement on Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it was signed on 25 April 2006. This autonomous agreement, which receives the European Commission's financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25 October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from <http://www.nepsi.eu> and provide useful information and guidance for the handling of products containing crystalline silica (fine fraction). Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers. Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In 2009, in the Monographs 100 series, IARC confirmed its classification of Silica Dust, Crystalline, in the form of Quartz and Cristobalite (IARC Monographs, Volume 100C, 2012). In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003). So there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required. Health & Safety Executive: Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE (Health and Safety Executive, UK) in the Hazard Assessment Documents EH75/4 (2002) and EH75/5 (2003). The HSE points out on its website that "Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis"." In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis.

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Revision 1

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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.