

REVISION :	Eighth
EMISSION:	December 2019
SHEET Nr:	SDS001

<b>SAFETY DATA SHEET</b>	
<b>PRODUCT</b>	<b>BENTONITE DESICCANT BAG</b>

(UE) N. 453/2010 Regulation Compliant - 20/05/2010

## **SECTION 0: Identification of this document**

This documents has to be considered an Annex XXXII of REACH Regulation (SIS), therefore all the informations included have to be considered only informative.

The document is redacted in the form of an Annex XXXI of REACH Regulation (SDS) for the sole purpose of clarity. The product itself is not dangerous and therefore does not need an SDS.

## **SECTION 1. Identification of the substance or mixture and of the company/undertaking**

### **1.1. Product Identifier.**

Name: Bentonite Clay Desiccant Bag

CE Number:215-108-5

CAS Number:1302-78-9

REACH Registration Number: Exempted according to Annex V.7

### **1.2. Relevant identified uses of the substance or mixture and uses advised against Identified Uses.**

Rheological modifier, adsorbent, filler or other application as foundry, agglomeration, drilling, building –civil engineering, filtration (oil, wine, beer) use as a pharmaceutical product or cosmetic, cat litter, food additive for human or animal consumption.

#### **Uses Advised Against.**

No uses advised against are identified.

### **1.3. Details Of The Supplier Of The Safety Data Sheet.**

DDC – Canadaco B.V.

Handelsstraat, 38 – 7482GW Haaksbergen – The Netherlands

Tel +31 (0)85 8881222

[info@ddc.nl](mailto:info@ddc.nl)

### **1.4. Emergency Telephone Number.**

**DDC - +31 (0)85 8881222**

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## **SECTION 2. Hazards Identification**

### **2.1 Classification of the substance and mixture.**

The substance is not classified as dangerous.

### **2.2 Labeling.**

The product does not require classification and labeling as hazardous according to CLP/GHS.

### **2.3. Other hazards.**

The product contains less than 1% w/w RCS (respirable crystalline silica) as determined by the SWERF method. The respirable crystalline silica content can be measured using the "Size-Weighted Respirable Fraction – SWERF" method. All details about the SWERF method are available at [www.crystallinesilica.eu](http://www.crystallinesilica.eu)

Depending on the handling and use (grinding, drying, bagging), airborne respirable dust may be generated. Dust contains respirable crystalline silica. 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 dust should be monitored and controlled. The product should be handled using methods and techniques that minimize or eliminate dust generation.

The substance does not meet the criteria for PBT or vPvB substance.

## **SECTION 3. Composition/informations about the ingredients**

### **3.1 Substances.**

IDENTIFICATION	CONC. %	CLASS. 1272/2008 (CLP)
<i>Bentonite Clay</i> (215-108-5)	100	---

Bentonite clay is a UVCB substance, sub-type 4. The purity of the product is 100 % w/w. Impurities are not applicable for a UVCB substance.

Synonyms: Bentonite, sodian; Bentonite, calcian; Montmorillonite, Sodium-activated Bentonite.

## **SECTION 4. First Aid Measures**

For more specific informations regarding the desiccant bag see 16. Appendice A). The following informations relates to Bentonite clay as a substance, included in this SIS for completeness.

### **4.1. Description of first aid measures.**

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

AFTER INHALATION Remove to fresh air immediately. Get medical attention immediately.

AFTER CONTACT WITH SKIN Wash off immediately with soap and plenty of water.

AFTER CONTACT WITH EYES Rinse thoroughly with plenty of water, also under the eyelids.

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If symptoms persist, call a physician.

AFTER INGESTION Clean mouth with water and drink afterwards plenty of water.

#### **4.2 Most Important symptoms and effects, both acute and delayed.**

No acute or delayed symptoms detected.

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

Treat Symptomatically.

## **SECTION 5. Fire Fighting Measures**

### **5.1. Extinguishing media.**

#### **Suitable extinguishing media.**

The product itself does not burn.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray jet, Dry powder, Foam, Carbon dioxide (CO<sub>2</sub>).

#### **Extinguishing media that must not be used for safety reasons.**

No restrictions.

### **5.2. Special hazards arising from the substance or mixture.**

The material is not flammable and it does not support fire. No hazardous thermal decomposition products.

### **5.3. Advice for firefighters.**

#### **Special protective equipment for firefighting.**

In the event of fire, wear self-contained breathing apparatus.

Special sliding risk through leaking of spilled product in connection with water.

## **SECTION 6. Accidental Release Measures**

### **6.1. Personal precautions, protective equipment and emergency procedures.**

Ensure adequate ventilation.

Avoid dust formation.

Evacuate personnel to safe areas.

Avoid contact with skin, eyes and clothing.

Wear personal protective equipment.

Avoid breathing dust.

Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).

Special sliding risk through leaking of spilled product in connection with water.

### **6.2. Environmental precautions.**

No special environmental precautions required.

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### 6.3. Methods and material for containment and cleaning up.

Pick up and transfer to properly labeled containers.

If product is released from trucks in roads, place signposts and remove the spill using vacuum cleaning systems.

### 6.4. Reference to other sections.

#### Additional information.

See points 8, 13.

Avoid dust formation; avoid dry sweeping.

Use vacuum suction unit, or shovel into bags.

## **SECTION 7. Safe Handling Measures**

For more specific informations regarding the desiccant bag see 16. Appendice A). The following informations relates to Bentonite clay as a substance, included in this SIS for completeness.

### 7.1. Precautions for safe handling.

#### Advice on safe handling.

Avoid dust formation.

Provide sufficient air exchange and/or exhaust in work rooms.

In case of insufficient ventilation, wear suitable respiratory equipment.

For personal protection see section 8.

Handle and open container with care.

If you require advice on safe handling techniques or specific uses, please contact your supplier or check the further information referred to in section 16.

#### Hygiene measures.

Wash hands during breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities.

#### Requirements for storage areas and containers.

Minimize airborne dust generation and prevent wind dispersal during loading and unloading.

Keep containers closed and store packaged products so as to prevent accidental bursting.

#### Advice on storage compatibility.

No conditions to be specially mentioned.

### 7.3. Specific end use(s).

Not relevant.

## **SECTION 8. Exposure Controls/Personal Protection**

For more specific informations regarding the desiccant bag see 16. Appendice A). The following informations relate to Bentonite clay as a free substance, included in this SIS for completeness.

### 8.1. Control Parameters.

Bentonite (Dust)	10 mg/m <sup>3</sup>	Nepsi (European Network on Silica)
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## 8.2. Exposure Controls.

**ENGINEERING MEASURES** Minimize 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 organizational measures e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

**EYE PROTECTION** If there's concrete risk of eye contact wear safety glasses with side-shields. Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.

**HAND PROTECTION** Use an high fat protective cream after cleaning skin. Wear suitable gloves

**SKIN AND BODY PROTECTION** Long sleeved clothing.

**RESPIRATORY PROTECTION** Local ventilation to keep levels below established threshold values is recommended. In case of prolonged exposure to airborne dust concentrations, a suitable particle filter mask that complies with the requirements of national legislation is recommended, depending on the expected exposure levels.

## **SECTION 9. Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties.**

<u>Appearance</u>	: Lumpy, granular
<u>Color</u>	: Bright to earthy
<u>Odor</u>	: None
<u>Odor Threshold</u>	: N.A.
<u>Ph</u>	: 6 – 11 (aqueous suspension)
<u>Melting Point</u>	: > 450° C
<u>Boiling Point</u>	: N.A.
<u>Flammability</u>	: N.A.
<u>Vapor Pressure</u>	: 0.1 Pa (20 °C)
<u>Relative Vapor Density</u>	: N.A.
<u>Density</u>	: 2,6 g/cm <sup>3</sup>
<u>Bulk Density</u>	:
<u>Solubility(ies)</u>	
Water Solubility	: <0.9 g/l
<u>Partition coefficient</u>	
n-Octanol/Water	: N.A.
<u>Auto-ignition temperature</u>	: N.A.
<u>Decomposition Temperature</u>	: N.A.
<u>Viscosity</u>	: N.A.
<u>Oxidizing Properties</u>	: No Oxidizing Properties

### **9.2 Other Informations.**

Not available.

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## **SECTION 10. Stability and Reactivity**

### **10.1 Reactivity.**

Stable under recommended storage conditions.

### **10.2 Chemical stability.**

The product is chemically stable.

### **10.3 Possibility of hazardous.**

Hazardous Reactions not known.

## **SECTION 11. Toxicological Information**

### **11.1 Information on toxicological effects.**

#### **Acute Toxicity.**

Acute Oral Toxicity	LD50 (Rat) > 2g/Kg Method: OECD Test Guideline 420
Acute Inhalation Toxicity	Remarks: no data available
Acute Dermal Toxicity	Remarks: no data available Bentonite is almost insoluble and has a low absorption through the skin

#### **Skin Corrosion/Irritation.**

Species	Rabbit
Method	OECD Test Guidelines 404
Result	No Skin Irritation

#### **Serious eye damage/eye irritation.**

Species	No data available
Method	OECD Test Guidelines 405
Result	No eye irritation

#### **Respiratory or Skin Sensitization.**

Species	
Method	No data available
Result	Bentonite is considered not to be a skin sensitizer based on experience in handling and low absorption through the skin

#### **Germ cell mutagenicity.**

Species	In vitro gene mutation study in bacteria
Method	OECD Test Guideline 471
Result	Negative

Species	Chromosome aberration test in vitro
Method	OECD Test Guidelines 473
Result	Negative

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Species	In vitro gene mutation study in mammalian cells
Method	OECD Test Guidelines 476
Result	Negative

#### Carcinogenicity.

Species	
Method	
Result	Based on available data, the classification criteria are not met

#### Reproductive Toxicity.

Species	
Method	
Result	Based on available data, the classification criteria are not met

#### STOT - Single Exposure.

Species	
Method	
Result	Based on available data, the classification criteria are not met

#### Aspiration Toxicity.

Species	
Method	
Result	No aspiration toxicity classification

#### Further Information.

Bentonite contains crystalline silica, which is a known cause of silicosis, a progressive, sometimes fatal lung disease. In a 1997 monograph (Volume 68, "Silica, Some Silicates, Coal Dust and Para-aramid Fibrils"), the International Agency for Research on cancer (IARC) has classified "inhaled crystalline silica from occupational sources" in Group 1 as a substance "carcinogenic to humans". In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Crystalline silica has also been classified by the German MAK Commission as a human carcinogen (Category A1).

Although bentonite contains quartz, an intratracheal study (Creutzenberg 2008) on the read across substance bentonite demonstrated significant differences in toxicity following administration of equivalent doses of quartz as either bentonite (15.2 mg of bentonite with 60% quartz) or reference quartz (10.5 mg of 87% quartz). The reference-quartz caused significant, self-perpetuating lung toxicity while bentonite demonstrated significantly less toxicity and partial recovery during the study period. The main effect of bentonite was slight fibrosis and inflammation of the lung. The study demonstrated that a simple bridging of toxicity data from quartz to bentonite is not appropriate.

Occupational exposure to respirable dust should be monitored and controlled.

## SECTION 12. Ecological Information

### 12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 16 g/l
	Exposure time: 96 hours

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Toxicity to fish	LC50 (Maine Water Fish) 2,8 – 3,2 g/l Exposure time: 24 hours
Toxicity to daphnia	EC50 > 100 mg/l Exposure time OECD time 96 hours
Toxicity to Metacarcinus Magister	EC 50 81,6 mg/l Exposure time: 96 hours
Pandalus Danae	EC50: 24,8 g/l Exposure time: 96 hours
Toxicity to algae	EC50 (Desmode subspicatus (green algae)) > 100 mg/l Exposure time: 72 hours
Plant toxicity	Phaseolus vulgaris: 84,4 mg/kg No effect on the growth was observed
Plant toxicity	Zea mays: 84,4 mg/kg No effect on the growth was observed

### 12.2 Persistence and degradability.

Biodegradability	The methods for determining biodegradability are not applicable to inorganic substances.
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### 12.3 Bioaccumulative potential.

Bioaccumulation	Not relevant for inorganic substances.
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### 12.4 Mobility in soil.

Distribution among environmental compartments	Medium: soil. Remarks: Bentonite is almost insoluble and thus presents a low mobility in most soils.
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### 12.5 Results of PBT and vPvB assessment.

Assessment	This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0,1% or higher.
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### 12.6 Other adverse effects.

Additional Ecological Information	None.
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## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods.**

#### **Product.**

Can be disposed like a solid waste in a suitable installation subject to the Environmental protection (Duty of Care) Regulations. Avoid dust formation. Where possible recycling is preferred to disposal or incineration.

#### **Contaminated packaging.**

No specific requirement.

## **SECTION 14: Transport information**

### **14.1 UN number.**

Not restricted.

### **14.2 UN proper shipping name.**

Not restricted.

### **14.3 Transport hazard class(es).**

Not restricted.

### **14.4 Packing Group.**

Not restricted.

### **14.5 Environmental Hazards.**

Not restricted.

### **14.6. Special precautions for user.**

See sections 6 to 8 of this Safety Data Sheets.

### **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code (International Bulk Chemicals Code).**

No transport as bulk according IBC – Code.

## **SECTION 15: Regulatory information**

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

The substance is not present in the Candidate list of Substances of very high concern, is not an ozone layer deplete or a persistent organic pollutant.

#### **Other regulations.**

Bentonite is not a SEVESO substance. The product is not separately classified by the Occupational Health and Safety Administration (OSHA). The product has not been classified as a human

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carcinogenic by OSHA. The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP).

### 15.2 Chemical safety assessment.

A hazard assessment has been conducted under the umbrella of the European Bentonite Association (EUBA) and the outcome was that bentonite is not a hazardous substances. Therefore, in absence of identified hazard, the substance is safe and presents no risk.

## **SECTION 16: Other information**

**A)** The informations included in this safety sheet are referred to the substance Bentonite clay, considered not stocked and free. Desert Disidratanti's desiccant Bag solves many risks about the dust formation, as long as the bag remains closed and sealed. The decision to include every information available about Bentonite clay is made for clarity and completeness.

### **B) General Bibliography.**

CE (1907/2006) Regulation, European Parliament (REACH)

CE (1272/2008 Regulation, European Parliament (CLP)

CE (435/2010) Regulation, European Parliament

CE (830/2015) Regulation, European Parliament

Registration Dossier and Chemical Assessment of the substances/mixtures included in this Safety Sheet

ESIS (European Chemical Substances Information System)

OECD SIDS Initial Assessment Report of the substances/mixtures included in this Safety Sheet

Handbook of Chemistry and Physics CRC Press INC.

ECHA website <http://apps.echa.europa.eu/registered/registered-sub.aspx>

Creutzenberg O, Hansen T, Ernst H & Muhle H (2008) Toxicity of a quartz with occluded surfaces in a 90 day intratracheal instillation study in rats; Inhalation toxicology. 20: 995-1008

### **C) Abbreviation Index.**

ACGIH: American Conference of Governmental Industrial Hygienists

ADR/RID:

CAS: Chemical Abstract Service

CLP: CE (1272/2008 Regulation

DNEL: Derived no effect level

EC 50: Half maximal effective concentration

EINECS: European Inventory of Existing Commercial Chemical Substances

GHS: Globally Harmonized System

IATA/ICAO: International Air Transport Association

IMDG /IMO: International Maritime Dangerous Goods Code

IMO: International Maritime Organization

IUCLID: International Uniform Chemical Information Database

LC 50: Lethal Concentration 50%

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LD 50: Lethal Dose 50%  
 LOAEL: Lowest Observed Adverse Effect Levels  
 N.A. : Not Applicable  
 N.D. : Not Available  
 NOAEL: No Observed Adverse Effect Level  
 NOEC: No Observed Adverse Concentration  
 EC Number: ESIS Identifier Number  
 INDEX Number: Annex. VI CLP Identifier Number  
 OCSE / OECD: Organization for Economic Co-operation and Development  
 OEL: Occupational Exposure Level  
 PBT: Persisten, Bioaccumulable or Toxic  
 PEL: Permissible Exposure Level  
 PNEC: Permissible No Effect Concentration  
 PNOC: Particulates Not Otherwise Classified  
 REACH: CE (1907/2006) Regulation  
 RID: Dangerous Goods Regulation  
 TLV: Treshold Limit Value  
 TLV CEILING: absolute exposure limit that should not be exceeded at any time  
 TWA STEL: Time weighted average Short Term Exposure Limit  
 TWA: Time weighted average  
 VLEP: Professional Exposure Limit Value  
 VOC: Volatile Organic Compound  
 vPvB: Very Persistent, Very Bioaccumulable

#### D) Disclaimer.

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