FICHA TÉCNICA

Arcilla Bentonita

1. Identification

Product Name:

Synonyms: Smectile • Bentonite • Bentonite, Sodian • Bentonile, Calcian • Sodium-activated Bentonite • Montmorillonite
Recommended Use: Not Available

Recommended Restrictions: None known. Workers (and customers, if resold) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

In Case of Emergency: 911

2. Hazard(s) Identification

Physical Hazards	Not classified
Health Hazards	Not classified
Environmental Hazards	Not classified
OSHA Defined Hazards	Not classified

Label Elements

Hazard Symbol	None
Signal Word	None
Hazard Statement	The substance does not meet the criteria for classification.
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazards Not Otherwise Classified (HNOC)	None known
Supplemental Information	Not applicable

3. Composition / Information on Ingredients

Substances

Chemical Name Common Name and Synonyms CAS Number %

Bentonite Smectile 1302-78-9 100

Bentonite
Bentonite, Sodian
Bentonile, Calcian
Sodium-activated Bentonite
Montmorillonite

Constituents

Chemical Name CAS Number %___

Calcium Carbonate 471-34-1

Smectite Group Minerals 1318-93-0

Quartz 14808-60-7 < = 8
Cristobalite 14464-48-1 < = 2

Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Bentonite is a UVCB substance sub-type 4. The purity of the product Is 100 %w/w. Bentonite is composed mainly of smectite group minerals but the composition is varied, as expected for a UVCB substance, and other mineral constituents will be present in small and varying amounts. These minor constituents are not relevant for classification and labelling.

Composition comments Occupational Exposure Limits for constituents are listed in Section 8. The purity of the product is 100% w/w. Impurities are not applicable for a UVCB substance.

4. First-aid Measures

Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist. No specific first aid measures noted.
Skin Contact Get medical attention if irritation develops and persists. No specific first aid measures noted. Wash skin with soap and water.
Eye Contact No specific first aid measures noted. Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion No specific first aid measures noted. Get medical assistance if discomfort occurs.

Most important symptoms/affects, acute and delayed Dust in the eyes will cause irritation

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

5. Fire-fighting Measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (C02). Use any media suitable for the surrounding fires.

Unsuitable Extinguishing Media	Not applicable, non-combustible.
Specific Hazards from Chemical	None known. The product itself does not burn.
Special Protective Equipment and Precautions for Firefighters	Material can be slippery when wet.
Fire-fighting Equipment / Instructions	In the event of fire, cool tanks with water spray. Material can be slippery when wet.
Specific Methods	Cool containers exposed to flames with water until well after the fire is out.
General Fire Hazards	No unusual fire or explosion hazards noted. This material will not burn.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Material can be slippery when wet. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Avoid inhalation of dust from the spilled material. For personal protection, see section 8 of the SDS. No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.
Methods and materials For containment and cleaning up	If sweeping of a contaminated area is necessary, use a dust suppressant agent which does not react with the product. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container. Prevent further leakage or spillage if safe to do so. No special environmental precautions required.

7. Handling and Storage

Precautions for safe handling	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid breathing dust. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	No special restrictions on storage with other products. Store in a dry area. Store in original tightly closed container. Keep the container dry. Store In a well ventilated place. Store away from Incompatible materials (see Section 10 of the SDS). Guard against dust accumulation of this material.

8. Exposure Controls/Personal Protection

Occupational exposure limits
US. OSHA Table Z-1Limits for Air Contaminants (29 CFR1910.1000)
Constituents Type Value Form

Inert or Nuisance Dusts (CAS SEQ250) PEL 5 mg/m3 Respirable fraction

15 mg/m3 Total dust

US OSHA Table Z-3 (29 CFR 1910.1000)
Constituents Type Value Form
Inert or Nuisance Dusts (CAS SEQ250) TWA 5 mg/m3 Respirable fraction

15 mg/m3 Total dust
50 mppcf Total dust
15 mppcf Respirable fraction

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate Ventilation should be sufficient to effectively remove and prevent buildup of any dusts
engineering controls or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL. Suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

Eye/face protection Use tight fitting goggles if dust is generated. Wear dust-resistant safety goggles where there is danger of eye contact.
Hand protection No protection is ordinarily required under normal conditions of use.
Other Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Use good industrial hygiene practices in handling this material.

9. Physical and Chemical Properties

Appearance Lump, granular or fine powder
Physical state Solid
Form Powder. Various
Color Various
Odor None
Odor threshold Not applicable
pH 8.5 – 11
Melting point/freezing point > 842°F (> 450°C) / Not applicable
Initial boiling point and range Not applicable
Flash point Not applicable
Evaporation rate Not available
Flammability (solid, gas) This product is not flammable
Upper/lower flammability or explosive limits
Flammability limit – lower Not applicable
Flammability limit - upper Not applicable
Explosive limit – lower Not available
Explosive limit – upper Not available
Vapor pressure 0 kPa at 25°C

Not applicable

Vapor density Not applicable
Relative density 2.6 g/cm3
Solubility
Solubility (water) < 0.9 mg/l
Partition coefficient Not applicable
(noctanol/water) Not applicable
Auto-ignition temperature Not applicable
Decomposition temperature > 932°F (> 500°C)
Viscosity Not applicable
Viscosity temperature Not applicable
Other Information
Bulk density 0.9 – 1.4 g/cm3
Explosive limit Not applicable
Explosive properties Not explosive
Explosivity Not applicable
Flame extension Not applicable
Flammability Not applicable
Flammability (flash back) Not applicable
Flammability (Heat of combustion) Not applicable
Flammability (Train fire) Not applicable
Flammability class Not applicable
Flash point class Not flammable
Molecular formula UVCB Substance
Molecular weight Not applicable
Oxidizing properties None
Percent volatile 0%
pH in aqueous solution 8.5 – 11
Specific gravity Not applicable
VOC (Weight %) 0%

10. Stability and Reactivity

Reactivity The product is stable and non-reactive
Chemical stability Stable at normal conditions
Possibility of hazardous reactions Will not occur
Conditions to avoid Moisture. Avoid temperature exceeding the decomposition

temperature. Contact with incompatible materials. Avoid dispersal of dust in the air (i.e. clearing dust surfaces with compressed air).
Incompatible materials None known
Hazardous decomposition product None

11. Toxicological Information

Information on likely routes of exposure
Ingestion Not classified
Inhalation Inhalation of dusts may cause respiratory irritation
Skin contact Not classified
Eye contact Dust in the eyes will cause irritation

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects
Acute toxicity Not classified
Species Test Results
Acute
Inhalation
LC50 Rat > 5.27 mg/l, 4 hrOECD 436
Oral
LD50 Rat > 2000 mg/kgOECD 425

Estimates for product may be based on additional component data not shown.

Skin corrosion / irritation Not classified
Serious eye damage / eye irritation Dust in the eyes will cause irritation. Mild irritant to eyes (according to the modified Kay and Calandra criteria)
Respiratory or skin sensitization
Respiratory sensitization Not classified
Skin sensitization Not classified
Germ cell mutagenicity Not classified
Carcinogenicity In June 2003, SCOEL (The EU Scientific Committee on Occupational Exposure Units) 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) According to the current state of the art worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. No carcinogenicity data available for this product. Sepiolite was evaluated by IARC as class 3 ("Cannot be classified as to carcinogenicity to humans). Based on read-across with sepiolite, bentonite was assessed as non-carcinogenic. Therefore8 classifications of bentonite for carcinogenicity is not warranted.
Reproductive toxicity Not classified
Specific target organ toxicity – single exp. Not classified
Specific target organ toxicity – repeated Not classified
Aspiration hazard Not available

12. Ecological Information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product Species Test Results

Bentonite (CAS 1302-78-9)
Crustacea EC50 Daphnia >100 mg/l, 48 hrs
Other EC50 Freshwater algae >100 mg/l, 72 hrs
LC50 Freshwater fish 16000 mg/l, 96 hrs
Marine water fish 2800-3200 mg/l, 24 hrs

Aquatic
Crustacea EC50 Coon Stripe Shrimp (Pandalus danae) 24.8 mg/l, 96 hrs
Dungeness or edible crab (Cancer magister) 81.6 mg/l, 96 hrs
Fish LC50 Rainbow trout, Donaldson trout (Oncorhynchus mykiss) 19000 mg/l, 96 hrs

Estimates for product may be based on additional component data not shown

Persistence and degradability Not relevant for inorganic substances
Bioaccumulative potential Will not bio-accumulate.
Mobility in soil Bentonite is almost insoluble and thus presents a low mobility in most soils.
Mobility in general The product has poor water-solubility
Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal Instructions

Collect and reclaim or dispose in seated containers at licensed waste disposal site.

local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code Dispose in accordance with all applicable regulations.
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused product

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions)

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Store containers and offer for recycling of material when in accordance with the local regulations.

14. Transport Information

DOT - Not regulated as dangerous goods.

IATA - Not regulated as dangerous goods.

IMDG - Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable