



## SECTION I. PRODUCT IDENTIFICATION

Product name:	Bentonite Clay
Chemical family:	Natural occurring, non-metallic mineral, product of mining
Recommended Use:	Bentonite has a variety of uses. It can be used as a rheology modifier, binding agent, absorbent, hydraulic-barrier, and filler.
Recommended restrictions:	Workers 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.
Supplier	Camden-Grey Essential Oils, Inc. 5751 Halifax Ave., Unit 2 Fort Myers, FL 33912 Emergency Tel. No.: Chemtrec 1-800-262-8200 // 1- 703-741-5500
Emergency telephone number	Chemtrec – 1.800424.9300 / 1.703.527.3887 CCN 797608

## SECTION II. 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	This substance does not meet the criteria for classification.
Prevention	Observe good industrial hygiene practices.
Response Storage	Wash hands after handling.
Disposal	Store away from incompatible materials.
Hazards not otherwise classified (HNOC)	Dispose of in accordance with local authority requirements. None know
Supplemental information	Not applicable.

### SECTION III. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Bentonite  
CAS# 1302-78-9  
% 100%

Common names & synonyms: Smectite, Bentonite, Bentonite Sodian, Bentonite Calcian, Sodium-activated Bentonite, Montmorillonite.

#### Constituents

<u>Chemical Name</u>	<u>CAS number</u>	<u>%</u>
Calcium Carbonate	471-34-1	
Smectite Group Minerals	1318-93-0	
Quartz	14808-60-7	<=8
Cristobal ite	14464-46-1	<=2

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 labeling. This product contains 10% total crystalline silica. The respirable crystalline silica as determined by the SWERF method is <1% w/w. Details about the SWERF method are available at [www.crystallinesilica.eu](http://www.crystallinesilica.eu).

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

### SECTION IV. FIRST-AID MEASURES

Inhalation No specific first aid measures noted. Move to fresh air.  
Call a physician if symptoms persist.

Skin contact No specific first aid measures noted. Wash skin with soap and water. Get medical attention if irritation develops and persists.

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. Rinse mouth thoroughly.

Most important symptoms/effects, acute and delayed Get medical attention if any discomfort occurs.  
Dust in the eye will cause irritation.

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

General Information No hazards which require special first aid measures. Provide general supportive measures and treat symptomatically.

## SECTION V. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ). Use any media suitable for surrounding fires.
Unsuitable extinguishing media	Not applicable, non-combustible.
Specific hazards arising from the 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.

## SECTION VI. 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 VIII of the SDS. No special precautions are necessary beyond normal good hygiene practices.
Methods and materials for containment and cleaning up	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with a 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 XIII of the SDS.
Environmental precautions	No special environmental precautions required. Prevent further leakage or spillage if safe to do so.

## SECTION VII. HANDLING AND STORAGE

Precautions for safe handling	Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.
Conditions for safe storage, including any incompatibilities	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 X of the SDS). Guard against dust accumulation of this material.

**SECTION VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Occupations exposure limits

US OSHA Table Z-1 Limits for Air Containments (29CFR 1910.1000)

<u>Constituents</u>	<u>Type</u>	<u>Value</u>	<u>Form</u>
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)

<u>Constituents</u>	<u>Type</u>	<u>Value</u>	<u>Form</u>
Inert or Nuisance Dusts (CAS SEQ250)	TWA	10 mg/m3	Inhalable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

Biological limit values  
Appropriate engineering controls

No biological exposure limits noted for the ingredients(s).  
Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particles below the OEL, suitable respiratory protection must be worn.

Individual protection measures, such as  
Eye/face protection

as personal protective equipment  
Use tight fitting goggles if dust is generated. Wear dust-resistant safety goggles where there is a 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 limit.

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.

**SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Lump, granular or fine powder.
Physical state	Solid.
Form	Various.
Color	Various.
Odor	None.
Odor threshold	Not applicable.
p-H	8.5-11

Melting point/freezing point	> 842° F (> 450°C)/Not applicable. Not applicable
Initial boiling point and boiling Range	
Flash point	Not applicable.
Evaporation rate	Not applicable.
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 applicable.
Explosive limit-upper %	Not applicable.
Vapor pressure	0 kPa at 25° C Not applicable. 2.6g/cm <sup>3</sup>
Relative density	
Solubility(les)	< 0.9 mg/1 Not applicable.
Solubility (water)	
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	> 932° F (> 500° C) Not applicable
Decomposition temperature	
Viscosity	
Other information	
Bulk density	
Particle size	0.9 - 1.4 g/cm <sup>3</sup>
VOC (Weight %)	Varies.
Molecular formula	0%
	UVCB Substance

## SECTION X. STABILITY AND REACTIVITY

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Moisture. Avoid temperatures exceeding the decomposition temperature. Avoid contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible material	None known.
Hazardous decomposition products	None.

## SECTION XI. 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	None known.

physical, chemical and toxicological characteristics

Information toxicological effects

Acute toxicity	Not classified.
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Product	Species	Test Results
Bentonite (CAS 1302-78-9)		
Acute		
Inhalation		
LC50	Rat	>5.27 mg/l, 4 hr OECD 436
Oral		
LD50	Rat	> 2000 mg/kg OECD 425
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 & Calandra criteria)	
Respiratory or skin sensitization		
Respiratory sensitization	Not classified.	
Skin sensitization	Not classified.	
Germ cell mutagenicity	Not classified.	
Carcinogenicity	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. Therefore classification of bentonite for carcinogenicity is not warranted.	
Reproductive toxicity	Not classified.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not available.	

SECTION XII. ECOLOGICAL INFORMATION

Ecotoxicity	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can had a harmful or damaging effect on the environment.
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Product	Species	Test Results
Bentonite (CAS 1302-78-0)	Crustacea EC50 Daphnia	> 100 mg/l, 48 hours

Other	EC50 Freshwater algae	> 100 mg/l, 72 hours
	LC50 Freshwater fish	16000 mg/l, 96 hours
	Marine water fish	2800 - 3200 mg/l, 24 hours
Aquatic		
Crustacea	EC50 Coon stripe shrimp ( <i>Pandalus danae</i> )	24.8 mg/l, 96 hours
	Dungeness or edible fish ( <i>Cancer magister</i> )	81.6 mg/l, 96 hours
Fish	LC50 Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> )	19000 mg/l, 96 hours
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 Other adverse effects	The product has poor water-solubility. No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

### SECTION XIII. DISPOSAL CONSIDERATIONS

Disposal instructions	Dispose in accordance with applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues/unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Store containers and offer for recycling of material when in accordance with the local regulations.

### SECTION XIV. 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.

### SECTION XV. REGULATORY INFORMATION

US federal regulations

CERCLA Hazardous Substance List (40 CFR 302.4)  
Not listed.

US OSHA Specifically Regulated Substances (29 CFR 19190.1001-1005) Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories                      Immediate Hazard - No  
    Delayed Hazard - No  
    Fire Hazard - No  
    Pressure Hazard - No  
    Reactivity Hazard - No

SARA 302 Extremely hazardous substance No SARA 311/312  
Hazardous Chemical No SARA 313 (TRI reporting)      Not  
regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not  
regulated.

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.120)  
Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US Massachusetts RTK - Substance List  
Not regulated.

US New Jersey Worker and Community Right-to-Know Act  
Not regulated.

US Rhode Island RTK  
Not regulated.

US California Proposition 65  
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). This  
material is not known to contain any chemicals currently listed as carcinogens or  
reproductive toxins.

International inventories

Country(s) or region	Inventory	On inventory (yes/no)*
Australia	Australia Inventory of Chemical Substances	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemical and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substance Control Act (TSCA)	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).



A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## SECTION XVI. OTHER INFORMATION

Version # 06

Further information

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS® ratings	Health: 1
	Flammability: 0
	Physical hazard: 0
NFPA ratings	Health: 0
	Flammability: 0
	Instability: 0

List of abbreviations

SWERF = Size-Weighted Relevant Fine Fraction

UVCB = a substance of Unknown or Variable composition. Complex reaction products or Biological materials.

DISCLAIMER: The information in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness and accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond Camden-Grey Essential Oils, Inc.’s control, it is the user’s responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense arising out of the product’s improper use. No warranty, expressed or implied, regarding the product described herein shall be created by or inferred from any statement or omission in this SDS. Various government agencies (e.g. DOT, EPA, FDA) may have specific regulations concerning the transportation, handling, storage, use or disposal of this product, which may not be reflected in this SDS. The user should review these regulations to ensure full compliance.