

MATERIAL SAFETY DATA SHEET

CALCIUM BENTONITE (MONTMORILLONITE)

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY	
Trade Name:	Calcium bentonite.
Usage:	Various
Supplier:	Medicina UK ltd
Address:	PO Box 54797, The Hyde, NW9 1GA
Phone Number:	02082052369
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2. COMPOSITION/INFORMATION ON INGREDIENTS
A natural hydrated aluminosilicate mineral with typical empirical formula: (Al, Fe _{0.67} Mg _{0.33}) Si ₄ O ₁₀ (OH) ₂ Na,Ca _{0.33} Typical mineralogical composition: >95% Bentonite (CAS No. 1302-78-9), <5% Quartz (CAS No. 14808-60-7).

3. HAZARD IDENTIFICATION
Bentonite is not flammable, combustible or explosive, and has no known adverse environmental effects. However it should be noted that this product may contain low levels (<5%) of quartz (CAS 14808-60-7). Quartz dust is injurious to the lungs.
Potential Health Effects
Inhalation: Respirable crystalline silica can cause chronic silicosis, a fibrosis of the lungs.
Eye Contact: May cause abrasion of the cornea.
Skin Contact: May cause abrasion to skin.
Ingestion: No known health effect.
Medical Conditions Aggravated by Exposure: The condition of individuals with lung disease (eg bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure.

4. FIRST-AID MEASURES	
Eyes:	May cause mechanical irritation which can result in redness, itching and lachrymation. If contact with the eye occurs, wash with copious amounts of water for approximately 15 minutes. Seek medical attention if irritation persists.
Skin:	May cause mechanical irritation in contact with the skin. Wash thoroughly with water. Wash clothes before re-use.
Ingestion:	Material is biologically inert. It is however highly adsorbent and could have a dehydrating effect if ingested in large amounts. Wash out mouth with water, and then give plenty of water to drink. Seek medical attention if irritation or other symptoms develop.
Inhalation:	May cause irritation of mucous membranes and upper airways. Symptoms may include sneezing, coughing and breathing difficulties. Move victim to fresh air and have the victim blow nose to remove excess dust. Ensure airways are clear. If breathing is difficult, a qualified person should give

	oxygen via a face mask. If irritation develops and persists, seek medical attention. Silicosis may result from excessive inhalation over an extended period.
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5. FIRE-FIGHTING MEASURES	
Extinguishing Media:	Use appropriate media to surrounding fire. Bentonite is compatible with all extinguishing media.
Special Exposure Hazards:	None known.
Protective Equipment for Fire Fighting:	Wear Self-Contained Breathing Apparatus (SCBA) and full protective clothing.
Hazardous Combustion Products:	None.

6. ACCIDENTAL RELEASE MEASURES	
Personal Precautions:	Use personal protection appropriate to the situation and quantity handled. The use of a dust mask, nitrile gloves and either goggles or safety glasses is recommended. If large amounts of dust are likely to be generated, use a respirator. Product is slippery when wet.
Environmental Precautions:	No known adverse environmental effects.
Spillages:	Scoop up spillages and place in a container. Avoid creating dusts. Wear appropriate respiratory protection, safety glasses and overalls as a precaution. When used to absorb a hazardous substance, handle as per that substance. Product is slippery when wet.

7. HANDLING AND STORAGE	
Handling:	Irritation to the skin or eyes is likely to be of a mechanical nature. No known toxicology due to accidental ingestion. Where dust is generated, the use of a mechanical exhaust ventilation system is recommended.
Storage:	Store in original packs/containers in a cool, dry, well ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION	
Occupational Exposure Limit (OEL):	Respirable silica 0.1 mg/m ³ TWA OEL Total respirable dust 4 mg/m ³ TWA OEL Total inhalable dust 10 mg/m ³ TWA OEL
Respiratory Protection:	The use of a dust mask is recommended. If large amounts of dust are likely to be generated, use a respirator.
Hand Protection:	Nitrile gloves should be worn.
Eye Protection:	Goggles or safety glasses should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES	
Physical State:	Free flowing powdered solid
Colour:	White or beige

Odour:	Odourless
PH:	6
Boiling Point (°C):	N/A
Melting Point/Freezing Point (°C):	N/A
Explosion Limits (%):	No known explosion hazards
Solubility in Water:	N/A
Vapour Pressure:	N/A
Vapour Density (Air=1):	N/A
Density:	Bulk density = 800-900 Kg/m ³
Flammability:	Not flammable
Specific Gravity:	2.5

10. STABILITY AND REACTIVITY

Stability:	Stable.
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11. TOXICOLOGICAL INFORMATION

Inhalation:	Silicosis of the lung may result from excessive inhalation over an extended period.
Skin and Eye Contact:	Irritation to the skin or eyes is likely to be of a mechanical nature.
Ingestion:	No known toxicology due to accidental ingestion.

12. ECOLOGICAL INFORMATION

Non toxic to aquatic life; persistent in the environment; does not bioaccumulate; immobile.

13. DISPOSAL CONSIDERATIONS

Product Disposal:	Disposal should be via landfill. Care should be taken to ensure that product is covered to stop any dust particles becoming airborne. It should be noted that contamination may occur during use and it is the responsibility of the user to assess an appropriate disposal method in this situation.
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14. TRANSPORT INFORMATION

Bentonite is not a hazardous material for purposes of transportation.

15. REGULATORY INFORMATION

Risk & Safety	Not classified as hazardous under the CHIP Regulations 2002 Not classified as hazardous according to EC/2001/58 & EEC/67/548
Other Regulations	Health & Safety At Work Act 1974; Control of Substances Hazardous to Health Regulations 2004 as amended; Environmental Protection Act 1990; EC Safety Data Sheet Directive EC/91/55.

16. OTHER INFORMATION

Medicina UK Ltd provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide

to the appropriate handling of the product by a properly trained person. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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Typical Chemical Composition of Calcium Bentonite:

Na₂O ... 1.72%
MgO ... 4.19%
Al₂O₃... 18.23%
SiO₂ ... 57.74%
P₂O₃ ... 0.13%
K₂O... 3.03%
CaO... 1.93%
TiO₂... 0.39%
Mn₃O₄... 0.08%
V₂O₅... <0.05%
Cr₂O₃... <0.05%
Fe₂O₃... 3.09%