



## BENTONITE MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/COMPANY

#### 1.1 Product identifiers

Product name: Bentonite (absorbent aluminium phyllosilicate)  
Chemical name: Crystalline quartz (naturally occurring contaminant)  
Brand: Metadynamics

#### 1.2 Details of the supplier of the safety data sheet

Company: Metadynamics CC  
108 Pebble Lane, Clayville ext. 14, Olifantsfontein, SA  
Tel: +27 11 316 4390 (SA) or +27 87 351 4886 (VOIP)  
Fax: +27 11 316 4395  
[www.metadynamics.co.za](http://www.metadynamics.co.za)

### 2. HAZARDS IDENTIFICATION

#### 2.1 Main Hazard

This clay product contains a small amount of crystalline silica, which may cause delayed respiratory disease if inhaled over a prolonged period of time. Avoid breathing dust.

#### 2.2 Flammability

Inorganic mineral: non-flammable.

#### 2.3 Chemical hazard

None.

#### 2.4 Biological hazard

No known effect.

#### 2.5 Reproduction hazard

No known effect.

#### 2.6 Eye effects

Causes redness and pain.

#### 2.7 Health effects

##### SKIN

Develops alkaline properties when wet, which may cause skin irritation or burns.

##### INGESTION

None.

##### INHALATION

May cause delayed respiratory disease if dust inhaled over a prolonged period of time. Excessive inhalation of dust may result in shortness of breath and reduced pulmonary function.

#### 2.8 Carcinogenicity

No known effect.



**2.9 Mutagenecity**  
No known effect.

**2.10 Neurotoxicity**  
No known effect

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Hazardous components**  
Naturally occurring hydrated alumino-silicate of sodium, calcium, magnesium and iron.

**3.2 EEC classification**  
N/A.

**3.3 Risk phrases**  
N/A.

### **4. FIRST AID MEASURES**

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

**IF INHALED**

Remove to fresh air. Give oxygen or artificial respiration if necessary. Get medical attention.

**IN CASE OF SKIN CONTACT**

Rinse well with water and refer to doctor if irritation persists.

**IN CASE OF EYE CONTACT**

Rinse well with water and refer to doctor if irritation persists.

**IF SWALLOWED**

None.

### **5. FIRE FIGHTING MEASURES**

**5.1 Extinguishing media**  
None.

**5.2 Special hazards**  
None.

**5.3 Protective clothing**  
None.

### **6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal Precautions**  
Avoid breathing dust. Wear an approved respirator.

**6.2 Environmental precautions**  
None.



108 Pebble Lane, Clayville ext. 14, Olifantsfontein, SA  
Tel: +27 11 316 4390 (SA) or +27 87 351 4886 (VOIP)  
Fax: +27 11 316 4395  
[www.metadynamics.co.za](http://www.metadynamics.co.za)

### 6.3 Small spills / large spills

Vacuum if possible to avoid generating airborne dust. DO NOT ADD WATER, as the product will become slippery when wet.

## 7. HANDLING AND STORAGE

### 7.1 Suitable material

N/A.

### 7.2 Handling/storage precautions

Avoid breathing dust. Use NIOSH/MSHA approved respirator where TLV limits for crystalline silica may be exceeded. Slippery when wet.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Occupational exposure limits

No data available.

### 8.2 Engineering control measures

Adequate dust control and dust extraction systems.

### 8.3 Personal protective equipment

#### RESPIRATORY PROTECTION

Use NIOSH/MSHA approved respirator.

#### HAND PROTECTION

Not required.

#### EYE PROTECTION

Safety goggles.

#### SKIN PROTECTION

Overalls and barrier cream.

### 8.4 Other protection

Use good housekeeping practices.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Colour: brown
- b) Moisture: 11.5
- c) pH (5 % in H<sub>2</sub>O): 8.4
- d) SG: 2.4 – 2.6
- e) Bulk density: 0.85 – 1.0

### 9.2 Other safety information

No data available.



## 10. STABILITY AND REACTIVITY

### 10.1 Conditions to avoid

Stable.

### 10.2 Incompatible materials

None.

### 10.3 Hazardous decomposition products

None known.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### ACUTE TOXICITY

No data available.

#### CHRONIC TOXICITY

Individuals with pulmonary and/or respiratory disease including but not limited to asthma and bronchitis should be precluded from exposure to dust.

#### CARCINOGENICITY

No known effect.

#### MUTAGENICITY

No known effect.

#### REPRODUCTIVE HAZARDS

No known effect.

## 12. ECOLOGICAL INFORMATION

### 12.1 Aquatic toxicity information

#### FISH

No data available.

#### DAPHNIA

No data available.

#### ALGAE

No data available.

#### BIODEGRADABILITY

No data available.

#### BIOACCUMULATION

No data available.



108 Pebble Lane, Clayville ext. 14, Olifantsfontein, SA  
Tel: +27 11 316 4390 (SA) or +27 87 351 4886 (VOIP)  
Fax: +27 11 316 4395  
[www.metadynamics.co.za](http://www.metadynamics.co.za)

**12.2 Mobility**  
N/A.

## **13. DISPOSAL CONSIDERATIONS**

**13.1 Disposal methods**  
Follow federal, state and local regulations for solid waste.

**13.2 Disposal packaging**  
N/A.

## **14. TRANSPORT INFORMATION**

**14.1 UN number**  
N/A.

**14.2 IMDG – EMS number**  
N/A.

**14.3 ADR/RID substance identity number**  
N/A.

**14.4 IMDG – MFAG table number**  
N/A.

**14.5 ADR/RID class**  
N/A.

**14.6 IATA – class**  
N/A.

**14.7 ADR/RID item number**  
N/A.

**14.8 IATA – subsidiary risk(s)**  
N/A.

**14.9 ADR/RID hazard identity number**  
N/A.

**14.10 UK – description**  
No data available.

**14.11 IMDG – shipping name**  
N/A.

**14.12 UK emergency action class**  
No data available.

**14.13 IMDG – class**  
N/A.



108 Pebble Lane, Clayville ext. 14, Olifantsfontein, SA  
Tel: +27 11 316 4390 (SA) or +27 87 351 4886 (VOIP)  
Fax: +27 11 316 4395  
[www.metadynamics.co.za](http://www.metadynamics.co.za)

**14.14 UK classification**

No data available.

**14.15 IMDG – packaging group**

N/A.

**14.16 Tremcard number**

N/A.

**14.17 IMDG – marine pollutant**

N/A.

**15. REGULATORY INFORMATION****15.1 EEC hazard classification**

N/A.

**15.2 Risk phrases**

N/A.

**15.3 Safety phrases**

N/A.

**15.4 National legislation**

OSH Act, National Road Traffic Act (when promulgated).

**16. OTHER INFORMATION**

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, management and for people working with or handling these products. This information is believed to be reliable and updated at 24/07/14 and represents the best information currently available and known by Metadynamics. However, Metadynamics makes no guarantee or warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. The information related herein is based on proper handling and anticipated uses and is for the material without chemical additions/alterations. Users should make their own investigations to determinate the suitability of the information for their particular purposes.