



## Certificate of Analysis

IDENTIFICATION				
Product Name	Zeolite Ultrafine Clay			
Product Code	CLAYZEOL			
Batch Number	4331401			
Best Before End	August 2021			
PHYSICAL & CHEMICAL CHARACTERISTICS				
Colour	Beige			
Bulk Density (MT/m <sup>3</sup> )	0.6 - 0.7			
Cation Exchange Capacity (meq/g)	1.5 - 1.9			
Micropore Area (m <sup>2</sup> /g)	11			
Mesopore Area (m <sup>2</sup> /g)	29			
pH	7 - 9			
Clinoptilolite	80-100%			
Tridymite	0-5%			
Cristobalite	0-5%			
Other Zeolite	0-5%			
ELEMENTAL ANALYSIS				
SiO <sub>2</sub> - 66.62%	Fe <sub>2</sub> O <sub>3</sub> - 0.92%	As - 7.4ppm	Al <sub>2</sub> O <sub>3</sub> - 11.26%	Na <sub>2</sub> O - 0.11%
Cd - 0.07ppm	CaO - 3.1%	TiO <sub>2</sub> - 0.07%	Pb - 23.8ppm	K <sub>2</sub> O - 2.37%
MnO - <0.01%	Hg - 0.006ppm	MgO - 0.89%	LOI 14.5%	
STORAGE AND SHELF LIFE				
Storage	Store in tightly closed container with minimum headspace in a cool, dark and dry place.			

This document represents the best of our knowledge and from information received from our supplier. It does not release the buyer from the obligation to carry out an examination of the goods received. All uses made by the buyer are done under their own responsibility.



**SAFETY DATA SHEET**  
**ZEOLITE POWDER (CLINOPTILOLITE)**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

Product name                               ZEOLITE CLAY  
Product No.                                 CLAYZEOL  
Synonyms, Trade Names                 Clinoptilolite Powder, ZeoClin

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

**1.3. Details of the supplier of the safety data sheet**

Supplier                                       MADAR Corporation Limited  
  19-20 Sandleheath Industrial Estate  
  Fordingbridge  
  Hampshire  
  SP6 1PA  
  
Telephone No                                01425 655555  
  
Approved Sellers                            Mystic Moments, New Directions, World of Moulds

**1.4. Emergency telephone number**

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Not classified.
Environment	Not classified.

Classification (67/548/EEC)               Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

**Human health**

This product does not meet the criteria for classification as hazardous as defined in the Regulation EC 1272/2008 and Directive 67/548/EEC. Depending on the type of handling and use, airborne respirable crystalline silica may be generated. Prolonged and/or massive inhalation of respirable crystalline silica dust (particles up to 10 microns in size) may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness.

**Environment**

This product is not expected to be hazardous to the environment.

**Physical and Chemical Hazards**

This product is an inorganic substance and does not meet the criteria for PBT or PvB in accordance with Annex XIII of REACH. This product should be handled with care to avoid dust generation.

**2.2. Label elements**

Label In Accordance With (EC) No. 1272/2008

No pictogram required.

**2.3. Other hazards**

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

# ZEOLITE POWDER (CLINOPTILOLITE)

## 3.1. Substances

Product name ZEOLITE POWDER (CLINOPTILOLITE)

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

Inhalation

Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

Ingestion

Immediately rinse mouth and provide fresh air. Get medical attention if any discomfort continues.

Skin contact

Wash skin thoroughly with soap and water. Use suitable lotion to moisturise skin.

Eye contact

Do not rub eye. Immediately flush with plenty of water or eyewash solution for up to 10 minutes. Get medical attention if any discomfort continues.

### 4.2. Most important symptoms and effects, both acute and delayed

General information

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

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

No specific first aid measures noted.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

Extinguishing media

The product is non-combustible.

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

Specific hazards

This product is not combustible. There are no hazardous thermal decomposition products.

### 5.3. Advice for firefighters

Special Fire Fighting Procedures

No specific fire fighting procedure given. Use an extinguishing agent suitable for the surrounding fire.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Avoid inhalation of dust. Wear personal protective equipment in compliance with national legislation.

### 6.2. Environmental precautions

No known adverse environmental effects.

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

Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Avoid generation and spreading of dust.

### 6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Avoid inhalation of dust and contact with skin and eyes. Provide good ventilation. Do not eat, drink or smoke when using the product. Always wash hands after handling. Remove and wash contaminated clothing before re-using.

# ZEOLITE POWDER (CLINOPTILOLITE)

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

Store in tightly closed original container in a dry and cool place. Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting.

## 7.3. Specific end use(s)

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control parameters

Ingredient Comments

WEL = Workplace Exposure Limits Respirable Dust = 4 mg/m<sup>3</sup>, Total inhalable dust = 10mg/m<sup>3</sup> Quartz: Workplace Exposure Limit = 0.1 mg/m<sup>3</sup>

#### 8.2. Exposure controls

Protective equipment



Process conditions

Provide eyewash station.

Engineering measures

Provide adequate ventilation.

Respiratory equipment

In case of prolonged exposure to airborne dust concentrations, wear a respiratory protective equipment that complies with the requirements of European or National Regulations.

Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

Eye protection

Wear goggles/face shield.

Hygiene measures

Good personal hygiene practices are always advisable, especially when working with chemicals / oils.

Skin protection

Wear apron or protective clothing in case of contact.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Appearance	Powdered Solid
Colour	Beige.
Odour	Characteristic.
Solubility	Insoluble in water
Melting point (°C)	approx 1300c

#### 9.2. Other information

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1. Reactivity

No specific reactivity hazards associated with this product.

# ZEOLITE POWDER (CLINOPTILOLITE)

## **10.2. Chemical stability**

Stable under normal temperature conditions.

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

Not applicable.

## **10.4. Conditions to avoid**

## **10.5. Incompatible materials**

Materials To Avoid

Strong oxidising agents. Hydrofluoric Acid

## **10.6. Hazardous decomposition products**

None under normal conditions.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

Toxicological information

This product has low toxicity

## **SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicity

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

### **12.1. Toxicity**

### **12.2. Persistence and degradability**

Degradability: This product is not biodegradable.

### **12.3. Bioaccumulative potential**

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

### **12.4. Mobility in soil**

Mobility:

This product is virtually insoluble in water.

### **12.5. Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB substances.

### **12.6. Other adverse effects**

None known.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

General information

This mineral can be disposed of as a non toxic/inactive material in approved landfill sites in accordance with local regulations.

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

Dispose of in compliance with all local and national regulations.

# ZEOLITE POWDER (CLINOPTILOLITE)

## SECTION 14: TRANSPORT INFORMATION

### General

Not regulated.

### 14.1. UN number

### 14.2. UN proper shipping name

### 14.3. Transport hazard class(es)

### 14.4. Packing group

### 14.5. Environmental hazards

### 14.6. Special precautions for user

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

## SECTION 15: REGULATORY INFORMATION

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

### 15.2. Chemical Safety Assessment

## SECTION 16: OTHER INFORMATION

SDS No. 20501

Risk Phrases In Full

NC Not classified.

Hazard Statements In Full

### Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



## PRODUCT SPECIFICATION

Product **ZEOLITE POWDER (clinoptilolite)**

### Physical Properties (Typical data)

Appearance:	Beige Powder
Bulk Density:	0.60 – 0.70 MT/m <sup>3</sup>
Cation Exchange Capacity:	1.5 – 1.9 meq/g
Micropore Area:	11m <sup>2</sup> /g
Mesopore Area:	29m <sup>2</sup> /g
pH:	7.0 – 9.0

### Mineralogical Analysis (Typical Date)

Clinoptilolite	88 – 100%
Other Zeolite	0 – 5%
Cristobalite	0 – 5%
Tridymite	0 – 5%

### Chemical Composition (Typical Date)

SiO <sub>2</sub>	65.83%	As	<0.2ppm
Al <sub>2</sub> O <sub>3</sub>	10.96%	Cd	<0.02ppm
CaO	3.11%	Pb	<16.8ppm
K <sub>2</sub> O	2.17%	Hg	<0.01ppm
MgO	0.95%		
FeO <sub>3</sub>	0.6%		
Na <sub>2</sub> O	0.23%		
MnO	<0.01%		
TiO	0.05%		
LOI	15.2%		

This product is not irradiated.

Particle size data:

D10 = 3.585 um  
D50 = 31.97um  
D90 = 200.307 um  
D98 = 377.89 um

The analytical values are subject to change as common with natural and nature identical products.  
These statements do not release the buyer from the duty of his own controls