



# TECHNICAL FILE BEIGE LIGHT MONTMORILLONITE CLAY LTO



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## A.1. MAJORITIES

### ORIGIN

The quarry is situated in SARDINIA in the town of VILLANOVA TULO.  
It has a surface area of 240 hectares and its main activity is the extraction of Montmorillonite for industrial use.  
Its most important characteristic is the presence of very pure montmorillonite ( more than 85% of the total mineral ).  
There are even some seams to be found with a purity of up to 97%, 98% even 99%.

### EXTRACTION

Firstly the products destined for the pharmaceutical industry or similar uses are detected in the quarry by series of core boring, thus allowing us to determine the seams which meet the desired norms.

The core boring is carried out at one metre intervals over a length of face of generally 25 metres, for an extraction of 250 tonnes.  
The average height is 3 to 4 metres, the thickness 2 to 3 metres.

The mineral is extracted by means of digging and the required quantity is immediately taken away and stored under shelter.

### TREATMENT

On extraction the clay comes in the form of semi-humid blocks ( 25% on average ), sized between 2 and 30 cm.

It has to be crushed in order to be dried properly.

Drying takes place in a rotational tempered steel dryer heated by gas.

There is a simultaneous current of air so that the temperature does not surpass 100°C.

The material is then ground on Forplex equipment, comprising an F3 grinder and an SD3 dynamic selector.

We can add besides that the drying process we have developed guarantees the bacteriological cleanliness of the clay we treat.

### CONTROLS

#### a) IN THE QUARRY

There are 3 types of control at this stage to select the area of extraction.

- X diffraction to identify the clay which is to be treated.
- Capacity for ionic exchange to check the richness in montmorillonite
- Level of lead and heavy metals

#### b) AFTER TREATMENT

The same analyses are conducted in 10 tonnes lots with in addition:

- A bacteriological control of each lot
- A physico-chemical control to check the granulometric conformity, the pH and so on.

Our technical sheets take into account all these analyses and naturally a product which does not comply with our demands is rejected.



## A.2. SCIENTIFIC DATA

### I. IDENTIFICATION

**SUPPLIER:** The Clay Cure Co.  
**PRODUCT NAME :** LTO Montmorillonite Clay  
**INCI Name / Composition :** MONTMORILLONITE ( Na, Ca )O<sub>0,33</sub> ( Al, Mg )<sub>2</sub> Si<sub>4</sub> O<sub>10</sub> ( OH )<sub>2</sub>, nH<sub>2</sub>O  
**INCI US name :** MONTMORILLONITE  
**N°CAS :** 1318-93-0  
**N° EINECS :** 215-288-5  
**Nomenclature customs :** 2508400000  
**Authorization in Bio market :** yes, 100% Natural product, certified ECOCERT  
**DESTINATION :** Para pharmaceutic, Cosmetic, Food complements  
**ORIGIN :** MINERAL  
**USES :** Foods supplements, cosmetic, parapharmaceutical  
**Storage conditions :** Dry, -10°C to 40 °C  
**Life :** not concerned  
**PRODUCT TESTED ON ANIMALS :** No  
**Packaging :** 25 Kg net  
**Containing :** Kraft Bags, 2 valves

### I. Technical Data Sheet

**INCI Name :** MONTMORILLONITE  
**Trademark :** Montmorillonite  
**N° CAS :** 1318-93-0  
**EINECS :** 215-288-5  
**( Na, Ca )O<sub>0,33</sub> ( Al, Mg )<sub>2</sub> Si<sub>4</sub> O<sub>10</sub> ( OH )<sub>2</sub>, nH<sub>2</sub>O**

	Aspect	Colour	Odour	pH	Density	C.E.C.
Result	fine Powder < 40 µm	beige light	no	7,5 to 8,5	0,6 to 0,7	120 Meq
Method	Sieving	Ref Pantone	-	10% H2O Di	Weight/volume	Adsorption Blue Méthylène

CHEMICAL ANALYSIS	Percentages
SiO <sub>2</sub>	58.12
Al <sub>2</sub> O <sub>3</sub>	20.73
Fe <sub>2</sub> O <sub>3</sub>	9.81
MgO	3.63
K <sub>2</sub> O	3.72
Na <sub>2</sub> O	< 60 ppm
TiO <sub>2</sub>	0.87
CaO	2.61
MnO	Traces
P <sub>2</sub> O <sub>5</sub>	Traces
Cr <sub>2</sub> O <sub>3</sub>	150 ppm

Bacteriological Analysis Average	Quantity per g
Mésophiles	< 300
Pathogènes	Absence
Yeast	< 20
Bacteria gram-	Absence
Salmonella	Absence
Escherichia coli	Absence

HEAVY METALS	Mg/kg
ARSENIC	1 to 1,6
LEAD	7 to 11
CADMIUM	< 1
MERCURY	< 1



Type of clay :	Natural Silicate of aluminium and both, Iron and Magnesium .
Major Constituent :	Smectite (Montmorillonite) > 65 %.
Presentation ( dry ) :	Green/Beige Clay Powder
Cation exchange Capacity ( C.E.C ) :	> 120 Meq per 100 g
Adsorbant Power (strychnine Sulfate ) :	> 400 mg/g
Grît ( Another of Montmorillonite ) :	< 2,90 % ( 0 %to 3 % max )
Lost of Ignition ( 1000°C ) :	10.60 % ( 10% to 13% max )

**Note :**

It has to be noted that speaking of a raw mineral chemical analysis is not exactly the same on each part of the quarry without any change of the clay itself.

Clays are mainly characterised by X-ray diffraction and cation exchange capacity.

By this fact we only give an average value for each component.

### A.3. DATA OF SAFETY

#### 1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

**Harmless product**

Trademark:	Beige Clay Montmorillonite
Use:	Para pharmaceuticals, cosmetics, food complements
The company:	The Clay Cure Co. 14 Elmhirst drive TQ9 5UX Totnes Phone number : 0044(0)1803411365

#### 2. COMPOSITION AND INFORMATION ON THE PRODUCT

Nature of the product:	raw material: 100% natural
INCI name :	MONTMORILLONITE
CAS number :	1318-93-0
EINECS :	215-288-5
Formula :	( Na, Ca )O <sub>0,33</sub> ( Al, Mg ) <sub>2</sub> Si <sub>4</sub> O <sub>10</sub> ( OH ) <sub>2</sub> , nH <sub>2</sub> O
Grit :	< 3%



### 3. IDENTIFICATION OF DANGERS AND FIRST AID MEASURES

Harmless product

- ❑ **If contact with skin** : Remove contaminated clothing, rinse with water ( or soap and water )
- ❑ **If contact with the eyes** : Flush thoroughly with water for at least 10 minutes. Seek medical attention if irritation marks appear.
- ❑ **If accidental ingestion** : Drink water
- ❑ **If fulsome inhalation** : Take the person to the closest source of fresh air and look after that person.
- ❑ **General comment** : Clay is not a dangerous product, however if a consequential intoxication occurs, getting medical attention becomes crucial.

### 4. PROTECTION MEASURES AGAINST FIRE

Clay is not inflammable, however the container is made with paper. Therefore, use an appropriate fire-extinguisher if needed. (use a water spray extinguisher).

### 5. MEASURES TO TAKE IN THE CASE OF AN ACCIDENTAL SPILL

- ❑ **Individual precaution** : avoid contact with the eyes.
- ❑ **Precaution to protect the environment** : avoid to spill in the sewer, in the ground or in any aquatic surroundings.
- ❑ **Cleaning methods** : Use a broom or a vacuum.

### 6. HANDLING AND STORAGE

- ❑ **handling**: Avoid contact with the eyes. Follow the usual hygiene rules. Keep rooms well aired out.
- ❑ **Storage**: It is recommended to store the clay in closed wooden barrels, preferably filled up and sheltered away from extreme temperatures and humidity.

### 7. EXPOSURE CONTROL/INDIVIDUAL PROTECTION

- ❑ **Exposure control** : Keep rooms well aired.
- ❑ **Breathing protection** : In the case of poor ventilation, wear a self-contained breathing device.
- ❑ **Hand protection** : When it is necessary to wear gloves, rather use naturel rubber gloves.
- ❑ **Eye protection** : If an eye protection is necessary, rather use waterproof glasses.
- ❑ **Skin protection** : In function of the organisation of the workplace, wear special clothing which protects from contamination made by the smell of personal clothes.

Follow the usual rules of hygiene.

### 8. STABILITY AND REACTIVITY

Good stability to common temperatures, keep away from humidity.

Avoid exposure to temperatures which are close to the flash-point. Do not heat up.

Avoid contact with oxidizing agents.



#### **9. TOXICOLOGICAL INFORMATION**

Complying with the standard EEC rules.

#### **10. ENVIRONMENTAL INFORMATION**

Does not contain any « per halogen » substance, or any similar product made to remain in the environment. This product was not subject to any « ecotoxicological » tests. Due to the difficulty of using the common « ecotoxicological » test methods to predict the impact of the various ways of contact with vulnerable areas in the ecosystem, this product must be considered and handled as if it were a potential threat for the environment. Take therefore all necessary precautions.

#### **11. INSTRUCTION CONCERNING RIDDANCE**

Garbage and refuse must be eliminated in keeping with the rules the European union or according to the national or regional legislation currently enacted.

#### **12. INSTRUCTION CONCERNING CARRIAGE**

In the case of an accidental leak or fire during transportation, please consult the above instructions.

#### **13. INFORMATION**

Pure raw material. May be destined to private use under that form or to industrial use.

#### **14. SPECIFIC INDICATION**

The information detailed in this form is based on our knowledge regarding the product on the specified date. It complies with the current legislation and is provided in good faith. However, please understand that possible risks may be run When a product is used for other purposes than those it is meant for.



## B. ALLERGENS

PRODUCT REFERENCE: **LTO Clay Montmorillonite**

### 1. PRESENCE OF ALLERGENS IN THE RAW MATERIALS

Sulphites	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
(precise the quantity if superior to 10 ppm ou 10 mg / kg)	
Sulfurous anhydride	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Peanut	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
And derived products (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Almond and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Hazelnut and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Cashew nut and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Macadamia nut (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Pecan nut and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Queesland nut and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Brazilian nut and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Nuts and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Pine nut and derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Pistachio and derivatives	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Other shell fruits or derivatives	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Eggs	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
and ovoproducts	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Fish - crustaceans	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
and derived products (including gelatine)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Soy	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
and derived products (including lecithin)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Gluten coming from:	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- wheat	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- rye	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- barley	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- spelt	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- oat	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- hybrid kinds	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
and products derived fril gluten	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- products taken from cereals containing gluten	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
- kamut	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Milk	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Dairy products	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Including lactose	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Any other product derived from milk	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>



Sesame	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
And derivatives (including oil)	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Lupine	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
And derivatives	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Celery	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
And derivatives	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Mustard	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
And derivatives	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>

<b>PRESENCE OF TRACES OF ALLERGENS</b> (risk of crossed contamination)
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IN THE SAME:	FACTORY	WORKSHOP	PRODUCTION LINE	FORM ( seed, flour, oil )
Sulphites	No	No	No	No
(precise the quantity if superior to 10 ppm ou 10 mg / kg)				
Sulfurous anhydride	No	No	No	No
Peanut	No	No	No	No
And derived products (including oil)				
Almond and derivatives (including oil)	No	No	No	No
Hazelnut and derivatives (including oil)	No	No	No	No
Cashew nut and derivatives (including oil)	No	No	No	No
Macadamia nut (including oil)	No	No	No	No
Pecan nut and derivatives (including oil)	No	No	No	No
Queesland nut and derivatives (including oil)	No	No	No	No
Brazilian nut and derivatives (including oil)	No	No	No	No
Nuts and derivatives (including oil)	No	No	No	No
Pine nut and derivatives (including oil)	No	No	No	No
Pistachio and derivatives	No	No	No	No
Other shell fruits or derivatives	No	No	No	No
Eggs	No	No	No	No
and ovoproducts	No	No	No	No
Fish - crustaceans	No	No	No	No
and derived products (including gelatine)	No	No	No	No





Soy	No	No	No	No
and derived products (including lecithin)	No	No	No	No
Gluten coming from:				
- wheat	No	No	No	No
- rye	No	No	No	No
- barley	No	No	No	No
- spelt	No	No	No	No
- oat	No	No	No	No
- hybrid kinds	No	No	No	No
and products derived from gluten	No	No	No	No
- products taken from cereals containing gluten	No	No	No	No
- kamut	No	No	No	No
milk	No	No	No	No
Dairy products	No	No	No	No
including lactose	No	No	No	No
Any other product derived from milk	No	No	No	No
Sesame	No	No	No	No
and derivatives (including oil)	No	No	No	No
Lupine	No	No	No	No
and derivatives	No	No	No	No
Celery	No	No	No	No
and derivatives	No	No	No	No
Mustard	No	No	No	No
and derivatives	No	No	No	No

### 3. PARTICULAR RISK: PEANUT

None

### 4. GENETICALLY MODIFIED ORGANISM

None



## COSMETIC'S ALLERGENS

DIRECTIVE 2003/15/CE - L'ANNEXE III - partie I : Liste des substances que les produits cosmétiques ne peuvent contenir en dehors des restrictions et conditions prévues - est complétée comme suit					
N°ordre	N° CAS	NOM USUEL	SUBSTANCE	INCI	PRESENCE
1	122-40-7	Jasmonal	2-benzylidèneheptanal	2-benzylidèneheptanal	NON
2	100-51-6	Benzyl Alcohol	Alcool Benzylque	Benzyl Alcohol	NON
3	104-54-1	Alc Cinnamique	Alcool Cinnamylique	Cinnamyl Alcohol	NON
4	5392-40-5	Citral	Citral	Citral	NON
5	97-53-0	Eugénol	Eugénol	Eugenol	NON
6	107-75-5	Hysimal(mélange)	7-Hydroxycitronellal	Hydroxycitronellal	NON
7	97-54-1	Isoeugénol	Isoeugénol	Isoeugenol	NON
8	101-85-9		2-pentyl-3-phenylprop-2-ène-1-ol	2-pentyl-3-phenylprop-2-ène-1-ol	NON
9	118-58-1	Benzyl Salicylate	Salicylate de benzyle	Benzyl Salicylate	NON
10	104-55-2	Cinnamaldéhyde	Cinnamaldéhyde	Cinnamal	NON
11	91-64-5	Coumarine	Coumarine	Coumarin	NON
12	106-24-1	Géraniol	Géraniol	Geraniol	NON
13	31906-04-4	Lylal	4-(4-Hydroxy-4-méthyl-pentyl) cyclohex-3-ènegaldéhyde	4-(4-Hydroxy-4-méthylpentyl) cyclohex-3-ènegaldéhyde	NON
14	105-13-5		Alcool 4-methoxy benzylque	4-Methoxybenzyl Alcool	NON
15	103-41-3		Cinnamate de Benzyle	Benzyl Cinnamate	NON
16	4602-84-0	Farnesol	Farnesol	Farnesol	NON
17	80-54-6	Lilial	2-(4-tert-butylbenzyl) propionaldéhyde	2-(4-tert-butylbenzyl) propionaldéhyde	NON
18	78-70-6	Linalol	Linalol	Linalool	NON
19	120-51-4	Benzoate Benzyl	Benzoate de Benzyle	Benzyl Benzoate	NON
20	106-22-9	Citronellol	Citronellol	Citronellol	NON
21	101-86-0	Jasmonal H Hexyl Cinnamal	$\alpha$ -hexylcinnamaldehyde	$\alpha$ -Hexylcinnamaldehyde	NON
22	5989-27-5	Orange terpenes Limonène	(R)-p-mentha-1,8-diène	(R)-p-mentha-1,8-diène	NON
23	111-12-6		Oct-2-ynoate de méthyle	Methyl Oct-2-ynoate	NON
24	127-51-5	Methylionone gamma	3-méthyl-4-(2,6,6-triméthyl-1-cyclohexène-1-yl)-3-butène-2-one	3-méthyl-4-(2,6,6-triméthyl-2-cyclohexène-1-yl)-3-butène-2-one	NON
25	90028-68-5	Mousse yougos	Evernia prunastri, extraits	Evernia prunastri	NON
26	90028-67-4		Evernia furfuracea, extraits	Evernia furfuracea	NON