Lightweight aggregates
UNI EN 13055-1

PUMICE SAND

PUMICE FOR MASONRY MORTAR AND PLASTER

COMPOSITION

Selected **PUMICE** (*an alveolar product of remarkable lightness and insulating properties resulting from the natural expansion of effusive magmatic mineral*) with a particle size of 0-3 mm. *(6- US Mesh)* suitable for the preparation of masonry mortar and **plaster.**
Material with excellent workability and durability properties.

APPLICATION FIELDS	
THERMOINSULATING MORTAR	BRICK OR STONE MASONRY
TRANSPIRANT MORTAR	INTERN OR EXTERN PLASTER
SOUNDPROOF MORTAR	STUCCATURE DOSAGE
FIRERESISTANT MORTAR	

Using the Pumice Sand a MORTAR having the following properties is obtained:	
THERMAL CONDUCTIVITY	λ = 0.15 W/(mK) (1)
SOUND INSULATION	BETWEEN 40-50 dB and 400-3200 Hz
TRANSPIRABILITY	μ = 4 (2)
EXCELLENT WORKABILITY	
FIRE-RESISTANT	
EXCELLENT VISUAL APPEARANCE OF THE SURFACE	
DURABILITY	

USE CONDITIONS	
PUMICE SAND + LIME	**PUMICE SAND + CEMENT + LIME**
- One part of lime	- One part of lime
- Three parts of pumice sand	- One part of cement
	- Three parts of pumice sand

BATCHING OF WATER:
Such a batching has to be chosen according to the desired workability.
PREPARATION OF THE MIXTURE:
- With an automatic dough
- With a concrete mixer
- In a vessel with a bucket or a ladle
- On the ground with a bucket

Blend the mixture (2 – 3 minutes) until you get a homogeneous mass ready to use. The carrier, on which the product has to be applied, has to be prepared in relation to the type of work, enabling a suitable mooring spot at the end.

NECESSARY DOSES
Approx 1.10 m^3 *(35.31 ft^3)* of Pumice Sand for each m^3 of mortar, mid gross-weight until reaching 820-880 Kg/m^3 *(51.19-54.94 lb/ft^3)*

CONTRACTUAL CONDITIONS

NATURAL BIOPLASTER WITH PUMICE SAND

Bioplaster for grounding of internal and external applications, manually or automatically with a piston pump, lighter natural material (density: 1,100 Kg/m^3 *equal to 68.67 lb/ft^3*), with transpirability μ=4, thermo insulating (λ=0.15 W/mK) [1], fire-resistant, consisting of natural pumice with a size of 0-3 mm *(4- US Mesh)*, bearing the CE marking, extracted in Pitigliano (GR) Pian di Valle-Nardeci quarry and consisting of natural hydraulic lime also bearing the CE marking.

The minimal thickness o application will be:

- generally not less than 1.5 cm *(0.59 in)*;
- at least 3 cm for dehumidification purposes of masonry;
- resulting from the thermo-physical calculation based on a thermal conductivity of λ=0.20 W/mK during tempering.

Highest thickness at cm 1.5 *(0.59 in)* will have to be performed in more layers.

The bioplaster is used like any other traditional base plaster and therefore all consolidated engineering practice has to be considered during application, (complete liming of the existing plasters, dampening on refusal of the carrier, the water of the mixture must be clean and free of salts, the work process has to be interrupted in case of wind or temperatures above 35°C and below 5°C, the surface must be kept humid during the first 5 days, etc.).

Should not be used on plasterboard and reinforced concrete.

PUMICE MEDIUM CHEMICAL ANALYSIS of representative samples of the front quarry	
SiO_2	56,8 % ± 5 %
Al_2O_3	18,8 % ± 5 %
K_2O	8,0 % ± 5 %
Fe_2O_3	4,2 % ± 5 %
CaO	4,5 % ± 5 %
Na_2O	1,9 % ± 5 %
TiO_2	0,5 % ± 5 %
MgO	1,6 % ± 5 %
P_2O_5	0,1 % ± 5 %
MnO	0,1 % ± 5 %
P.F.	3,9 % ± 5 %
pH	7-8

[1] Theoretical value from calculation
[2] Certificated by Politecnico of Torino n. 1471 from the 06/08/2004

AVAILABLE BULK, in BIG-BAGS of 1.5 m^3/each (53 ft^3), in BAGS of 33 LT (7.26 gal) on pallets of 45 BAGS/each.

*The corresponding **Imperial Measurements** are shown in brackets.*

This mineral is a natural raw material. All data indicated above are therefore approximate and do not provide any warranty.