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VOLCANIC LAPILLUS
FOR BUILDING INDUSTRY

Lightweight aggregates
UNI EN 13055-1

COMPOSITION: OPEN CELLS ALVEOLAR LAPILLUS

Effusive magmatic mineral (Vulsini Volcanite from the Pleistocene period) naturally calcined at high temperature, **POROUS, INSULATING, LIGHTWEIGHT**. Because of its properties it is added to materials which allow the reduction of energetic consumption in conformity with the executive decree 192/05 norm and the executive decree 311/06.

APPLICATION FIELDS	
RESTRUCTURING MASONRY AND REINFORCED CONCRETE (RC)	THERMAL AND ACOUSTIC INSULATION
RESTORING, STRENGTENING AND REINFORCING FLOORS	ROAD EMBANKMENTS
SUBSTRATE INSULATION	STABILIZED DRAINAGED
LIGHTWEIGHT FILLINGS	
THERMAL AND SOUND INSULATING BLOCKS AND PANELS	

PHISICAL AND CHEMICAL PROPERTIES

Bulk density: approx. 950-1,140 kg/m^3 *
Water absorption (WA24): approx. 12-15% *
Granules density (S.S.A.): approx. 1,850 kg/m^3 *
Crushing resistance: approx. 1.60 N/mm^2 *
Temperature resistance: 1140°C - 1150°C
Thermal conductivity: λ = 0.15 W/(mK) **
Mineral containing no active limestone and no Free Crystalline Silica

Imperial Measurements Lapillus 4x6, 3/8"x4, 5/8"x3/8" US Mesh:
Bulk density approx 59.31-71.17 lb/ft^3
Granules density (S.S.A.) approx 115.49 lb/ft^3
Crushing resistance approx 0.232 ksi
Temperature resistance: 2084°F - 2102°F

MEDIUM CHEMICAL ANALISYS of representative samples of the front quarry	
SiO_2	56 %
Al_2O_3	16,5 %
K_2O	4,9 %
Fe_2O_3	6,5 %
CaO	8,8 %
Na_2O	2,2 %
TiO_2	0,8 %
MgO	3,1 %
P.F.	1,2 %
pH	7-8

FUNCTIONAL PROPERTIES

Sound insulation
Transpiration skill
Excellent workability
Fire-resistant
Durability
Color: red amber /brown

AVAILABLE TYPES	GRAN SIZE		APPENT DENSITY Material in a wet quarry	
SAND	0 - 3 mm	*6- US Mesh*	950 - 1,150 Kg/m^3	59.31 - 71.79 lb/ft^3
GRANULES	3 - 5 mm	*4 x 6 US Mesh*	850 - 1,050 Kg/m^3	53.06 - 65.55 lb/ft^3
GRANULES	5 - 10 mm	*3/8" x 4 US Mesh*	830 - 1,000 Kg/m^3	51.82 - 62.43 lb/ft^3
GRANULES	10 - 16 mm	*5/8" x 3/8" US Mesh*	760 - 1,000 Kg/m^3	47.45 - 62.43 lb/ft^3
GRAVEL	20 - 70 mm	*+1 US Mesh*	750 - 1,200 Kg/m^3	46.82 - 74.91 lb/ft^3

* *Data refers to Lapillus grain sizes 0-3, 3-5, 5-10, 10-16 mm (Lapillus grain sizes 4x6, 3/8"x4, 5/8"x3/8" US Mesh)*
** *Certificated by Lab. Certimac SQM_046_2024 of 27/03/2024*

AVAILABLE BULK, IN BAGS (BIG-BAGS) 1,5 MC SIZE (*53 ft^3*) AND IN 33 LT (*7.26 gal*) BAGS PACKED ON PALLETS (50 bags/each)

THEORETICAL DESIGN MIX			
MECHANICAL RESISTANCE (N/mm^2)	Min. dose of cement 42,5 (kg/m^3)	Ratio binding water	Specific weight (kg/m^3)
Rck 15	320	0,65	1.650
Rck 20	350	0,60	1.680
Rck 25	380	0,56	1.710
Rck 30	410	0,52	1.740
Rck 35	440	0,48	1.770
Rck 40	480	0,45	1.810
N.B. ALL THE FORMULAS MUST BE TESTED PREVENTIVELY BY A QUALIFIED LABORATORY			

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