Lightweight aggregates
UNI EN 13055-1

POMICAL FOR STRUCTURAL USE 44

MIXTURE OF LIGHTWEIGHT AGGREGATES FOR CLS STRUCTURAL

Europomice identified in PUMICE and LAPILLUS products able to meet the new needs of the construction industry: **lightness, absence of silica free, thermal and sound insulation, fluid retention**, make these volcanic aggregates of efficient substitutes for polystyrene, expanded clays and other similar materials.

Pomical for Structural Use 44 among other does not requires machining prior to use and maintains high characteristics of pumpability and workability, even in extreme conditions.

COMPOSITION

POMICAL FOR STRUCTUR USE 44 is a ***mixture of alveolar volcanic aggregates of remarkable lightness and great isolating properties*** resulting from natural extensions of effusive magmatic minerals*) in granulometric curves of 3-10 mm (3/8"x6 US Mesh)* ***for the production of lighter thermo insulating and soundproof structural concrete*** at low specific weight and easy pumping.

This is a product that contains no Free Crystalline Silica.

PHYSICAL PROPERTIES	
COLOR	Grey
GRAINS FORM	Polyhedral
GRAIN SIZE	3-10 mm *(3/8"x6 US Mesh)*
RESISTANT AGAINST FRAGMENTATION/CRASHING	1.47 N/mm^2 *(0.21 ksi)*
TOTAL WATER CONTENT	9.3%
WATER ABSORPTION	12.8%
SPECIFIC WEIGHT IN PILE	0.870 mg/m^3
SPECIFIC WEIGHT DRY SATURATED SURFACE	1.98 mg/m^3 + 5%
TEMPERATURE RESISTANT	1140°C – 1150°C *(2084°F - 2102°F)*

CHEMICAL PROPERTIES	
ALKAL-SILICA REACTIVITY (average expansion % after 90 days)	0.0161% (not reactive)
CHLORIDES	< 0.001%
SOLUBLE SULPHATES IN ACID	< 0.05%
TOTAL SULFUR	< 0.04%
CONTENT DETERMINATION OF HUMIC/SUBSTANCE	Absent
CONTAINS NO FREE CRYSTALLINE SILICA	

Using POMICAL FOR STRUCTURAL USE 44, cement, water and any additives, an OPTIMIZED CONCRETE is obtained with following properties:	
LIGHTNESS	Dry density less than 2000 Kg/m^3 *(124.86 lb/ft^3)*
STRENGTH CLASS	LC 40/44 N/mm^2 *(5.80/6.38 ksi)*
THERMAL CONDUCTIVITY	λ = 0,15 W/mK (1)
TRANSPIRABILITY	μ=4 (2)
SOUND INSULATION	
EXCELLENT WORKABILITY	
FIRE-RESISTANT	
EXTREMELY EASY PUMPING	
BLEEDING ABSENCE	
DURABILITY	
EXCELLENT VISUAL APPEARANCE OF THE SURFACE	

WORDING PROPOSED

Resistance Class (N/mm^2)	Minimum cement dosage 42,5 (kg/m^3)	Water cement ratio	Specific weight (kg/m^3)	Specific weight hardened concrete (kg/m^3)	Sand percentage 0-6 mm.
LC 30/33	420	0.50	2021	1859	35%
LC 35/38	460	0.48	2018	1857	35%
LC 40/44	510	0.45	2018	1857	35%

N.B. All proposed formulations must be pre-tested by a qualified laboratory. Any variations in dosages can alter the final characteristics of the product.

AVAILABLE BULK, in BIG-BAGS of 1,5 m^3 (*53 ft^3*), in BAGS of 33 lt. (*7.26 gal*) on pallets of 50 bags/each.

THE AVERAGE LOAD VOLUME FOR COMPLETE LOADS IS ABOUT 31 m^3.

(1) Certificated by lab. Certimac SQM_043_2024 dated 03/27/2024

(2) Certificated by Politecnico of Torino n. 1470 from the 08/06/2004

*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.