



Lightweight
aggregates
UNI EN 13055-1

POMICAL 0/8 PUMICE FOR LIGHTWEIGHT CONCRETE

COMPOSITION:

POMICAL is a mixture of pumice (alveolar product of remarkable lightness and high insulating properties resulting from the natural expansion of effusive magmatic mineral) with a particle size distribution curve of 0-8 mm and used in the production of lightweight thermo-insulating and soundproof concrete with a low specific weight and is easily pumped.

This is an ecological product that contains no Free Crystalline Silica.

| FIELDS OF APPLICATION | |
|--|-------------------------------|
| LIGHTWEIGHT, PUMPABLE STRUCTURAL CONCRETE FOR THERMAL AND ACOUSTIC INSULATION | LIGHTWEIGHT FILLINGS |
| INTERIOR AND EXTERIOR SUBSTRATE SCREEDS | LIGHTWEIGHT BUILDING PRODUCTS |
| RESTORING AND REINFORCING FLOORS | LIGHTWEIGHT FILLINGS |
| RESTRUCTURING AND LIGHTENING MASONRY AND REINFORCED CONCRETE WORKS TO REDUCE THE PERMANENT LOAD ON THE STRUCTURE | GREEN BUILDING |

| PHYSICAL PROPERTIES | |
|--|------------------------|
| COLOR | Red-amber/brown |
| GRAINS FORM | Polyhedral |
| GRAIN SIZE | 0-8 mm. |
| RESISTANT AGAINST FRAGMENTATION/CRASHING | 1,24 N/mm ² |
| TOTAL WATER CONTENT | 29,5% |
| WATER ABSORPTION | 18,3% |
| SPECIFIC WEIGHT IN PILE | 0,54 Mg/m ³ |
| SPECIFIC WEIGHT DRY SATURATED SURFACE | 1,54 Mg/m ³ |
| TEMPERATURE RESISTANT | 1140 °C - 1150 °C |

| CHEMICAL PROPERTIES | |
|---|------------------------|
| ALKAL-SILICA REACTIVITY (average expansion % after 90 days) | 0,0205% (not reactive) |
| CHLORIDES | < 0,001% |
| SOLUBLE SULPHATES IN ACID | < 0,05% |
| TOTAL SULFUR | < 0,04% |
| CONTENT DETERMINATION OF HUMIC/SUBSTANCE | clearer (absent) |
| RADIOACTIVITY EMISSION | NDP |
| HEAVY METALS EMISSION | NPD |
| POLYAROMATIC HYDROCARBONS EMISSION | NDP |
| OTHER DANGEROUS SUBSTANCES EMISSION | NDP |
| NON-TOXIC PRODUCT (Silica Free) | |



Using POMICAL 0/8, cement, water and any additives,
an OPTIMIZED CONCRETE is obtained with following properties:

| | |
|--|--|
| LIGHTNESS | Dry density below 1.000 Kg/MC |
| RESISTANT AGAINST COMPRESSION | RCK circa 10 N/mm ² |
| THERMAL INSULATION | $\lambda=0,16$ W/(mK) ⁽¹⁾ |
| SOUND INSULATION | 46 dB 8 cm partition wall+ plaster 1,5+1,5cm |
| TRANSPIRABILITY | $\mu=4$ ⁽²⁾ |
| GRAIN SIZE | 0/8 mm. |
| EXCELLENT WORKABILITY | BLEEDING ABSENCE |
| FIRE-RESISTANT | DURABILITY |
| EXTREMELY EASY PUMPING | ENVIRONMENTALLY FRIENDLY |
| EXCELLENT VISUAL APPEARANCE OF THE SURFACE | |

APPLICATION PROCEDURE

- Place the volume of POMICAL 0/8 in regard to the specific weight
- Volume of water needed is approx 200-250 l/m³ of POMICAL 0/8
- At first insert approx. 80% o water into the concrete mixer
- Insert POMICAL 0/8 and cement in the needed quantity
- Continue adding of water until obtaining the desired consistency
- Pumping with standard pumps

NECESSARY DOSING

- Approx. 1,20 MC of Pomical 0/8 per 1 MC of concrete, mid gross-weight until reaching 750-850 Kg/MC.

AVAILABLE BULK, in BIG-BAGS of 1,8 m³, in BAGS of 33 lt. (7.26 gal) on pallets of 55 bags/each.

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



CONTRACT SPECIFICATIONS**LIGHT CONCRETE WITH POMICAL 0/8**

Ecological concrete, natural, lighted (density in dry condition $< 1.100 \text{ Kg/m}^3$), with transpirability $\mu=4$, thermal insulation ($\lambda= 0,164 \text{ W/mK}$), fire-resistant, compression resistance: $\text{RCK}=10 \text{ N/mm}^2$, consisting of natural pumice with a grain size of 0-8 mm, bearing the CE marking, extracted from Pitigliano (GR) Pian di Valle Nardeci quarry and consisting of cement with CE marking, applicable for:

- Internal and external jumpable plaster for floor application, also those sensitive to water (wooden, resilient....)
- Support and filling of cloistered vaults, arches and domes,
- Thermal insulation of attics
- Safety positioning of abandoned underground tanks, and for filling of cavities.

The min. thickness of application of the lighter substrate should be 5 cm.

For larger thicknesses one or more electro-welded net layers or plastic net have to be inserted.

The regulation layer must have always a break down picked up from the load-bearing components by inserting suitable sound insulations (floating solids).

During tempering the final thickness is resulting from the thermo-physical calculation based on a thermal conductivity of $\lambda= 0,164 \text{ W/mK}$.

The substrates' drying time reaching the residual moisture of 2%, in accordance to the actually applicable standards, is 5 days per every cm of the substrate at a temperature of 18°C . Higher temperatures reduce the drying time, and lower ones increase it.

The light concrete should not be performed at temperatures lower than 5°C or higher than 35°C and it has to be protected from frost during the first 15 days.

In case of strong winds use anti-evaporation surface products.

Not suitable for the realization of supporting load-bearing structures

For further technical information and how to use Pomical in the concrete packaging and pumping phases, you can contact the Europomice S.r.l sales offices directly.

(1) Certificated by Politecnico of Torino n° 1450 and 1451 dated 04/21/2004

(2) Certificated by Politecnico of Torino n° 1470 dated 06/08/2004

