



## **BOIACCA INIEZIONE 100**

### **INJECTION GROUT 100**

*Biocompatible and environmentally-friendly mortar of pozzolanic hydraulic lime for the structural restoration of historical walls*

Boiaccia Iniezione 100 – Calchèra San Giorgio is a mortar of hydraulic pozzolanic lime for consolidating and breathable injection of historical walls. Composed of pozzolanic hydraulic lime obtained by cold mixing of pure aerial slaked lime with a very high calcium hydrate ratio and selected natural pozzolana, mixed with micronized carbonate aggregates and expansive elements for the plastic settlement control. It does not contain sulphate, free lime and any traces of clinker; it is highly breathable and it does not alter the steam permeability of the handwork. Free from substances harmful to health and environment. Recyclable as an inert material at the end of its life.



#### **FIELDS OF APPLICATION**

Pozzolanic lime mortar specific for the structural restoration of historical walls in stone, bricks and mixed work: both for consolidation of the entire masonry with injection grid and for filling cracks no longer active. Pozzolanic lime remarkable hydraulic character, absence of water-soluble salts, mortar high water vapour diffusion coefficient and low elastic modulus, Boiaccia Iniezione 100 - Calchèra San Giorgio is ideal for the structural consolidation of historical walls and for filling losses even under critical conditions with disintegrating materials and in damp and crumbling sites.

#### **SUBSTRATE PREPARATION**

- The spacing of the injection grid has to be evaluated based on the masonry's characteristics prior to the intervention: in general, optimal spacing is 4-6 holes per square meter, or for cracks, every 20-30 cm along the entire length of the crack.
- Injection tubes for the introduction of the consolidating grout are inserted in existing holes or holes with a diameter of 20 mm are bored to a depth of 4/5 of the thickness of the wall with electric drills with single rotation, avoiding percussion. The bore holes must be drilled with a slight downward slope to facilitate percolation of the grout.
- The areas to be consolidated must be sealed beforehand to avoid leakage of the injected product, using materials suitable for the interventions planned on the structure. For exposed masonry or to close cracks, use Fortis Muratura - Calchèra San Giorgio or Rudus Muratura - Calchèra San Giorgio. For the reintegration of plaster or application of new plaster with a preliminary levelling coat, use Fortis Intonaco - Calchèra San Giorgio, Rudus Rinzafo - Calchèra San Giorgio or Rudus Intonaco - Calchèra San Giorgio.
- Before injecting, carefully wash the inside of the masonry from top to bottom using clean water to remove powdery material and disintegrated mortar and to facilitate adhesion of the injected product.

#### **MIXING**

Mix each 15 Kg package with about 5,3-5,7 Lt of clean water, that is about the 35-40% of the powder weight. Mix carefully with specific mixer at low speed for about 5 minutes until fluid and homogeneous compound is achieved. Do not mix by hands.

#### **APPLICATION**

Taking care to avoid trapping air between the injection holes, the product is injected from the bottom to the top, from the edges toward the centre of the wall manually through percolation or using specific low-pressure machines (approx. 1 -1.5 ATM), equipped with a manometer that's quick and easy to read. Injection continues until the grout emerges from the injection tube in the next position to be filled. When the hole is full, the injection tube is tipped up and closed for consolidation. Once injection is complete, and after the mixture has hardened, the injection tubes are removed and the holes closed with a suitable material to be determined based on the subsequent work on the masonry.



Building  
restoration



Green  
building



Artistic and  
archaeological restoration

### APPLICATION TEMPERATURE

Apply at room and surface temperature between +5°C and + 35°C.

### CONSUMPTION

Variable according to the deterioration of the surfaces.

### TECHNICAL DATA

Form	Powder
Colour	Amber White
Binder	Pantheon Pozzolan Lime
UNI EN 459-1	FL 5
Grain size UNI EN 1015-1	From 0 to 100 µm
Dried mortar apparent density UNI EN 1015-10	≈ 1400 Kg/m <sup>3</sup>
Bending strength UNI EN 1015-11	> 2,20 N/mm <sup>2</sup>
Compressive strength UNI EN 1015-11	> 10 N/mm <sup>2</sup> – Class M 10
Tensile strength steel bar UNI EN 10157	Extraction force 3500 N
Static elastic modulus UNI EN 13412	5500 N/mm <sup>2</sup>
Water vapour permeability UNI EN 1015-19	µ < 6
Free lime content to 28 days UNI EN 459-2	Absent
pH	13
Flame resistance	Class A1
Compliant with EN 998-2	

### PACKAGING

15 Kg bags / 10 Kg buckets

### STORAGE

Store in a dry and cool place. Protect from damp, rain, frost and sources of heat. Apply within 12 months of production date.

### WARNINGS

*Product for professional use. Do not modify the product. Protect from rain throughout the entire drying period. Due to the use of pure and natural raw materials, colour uniformity cannot be guaranteed between different supplies of the material. The information and directions reported refer to laboratory tests along with the technical and applicative knowledge we possess. It is advisable to carry out practical tests on-site. However, the user must verify the suitability of the product for its intended use and its consumption, assuming all liability arising from its application. The company reserves the right to make technical changes without prior notice. Please refer to the Safety Data Sheet prior to using the product.*