INTOCALCE IN

ECO-FRIENDLY INJECTION BIO-MORTAR BASED ON NATURAL HYDRAULIC LIME NHL 5 OR NHL 3.5
Compliant with UNI EN 998-1

DESCRIPTION

It is a eco-friendly bio-mortar based on natural hydraulic lime NHL 5 or NHL 3.5 compliant with EN 459-1 cement-free, with a super fluid consistence specific for the reinforcement by injection of masonries, sulphate resistant so suitable with mortars and historical masonries. Recyclable as inert at the end of life. Specific for the conservative historical restoration, thanks to the natural origin of its components that respect the nature of the original materials of the structures of historical interest.

COMPOSITION

Natural hydraulic lime NHL 5 or NHL 3.5 compliant with EN 459-1 obtained by burning marbly limestones at 950°C, carbonated and siliceous selected sands with grading from 0 to 0,3 mm, natural additives tested for the specific use which give to the product a very high fluidity and resistance.

FEATURES

An accurate and selective choice of the main material made with a perfect grading curve, thanks to the use of our own crush system, produce just adding water an injection mortar very and injectable.

USE

For the restoration of historical masonries in tuff, bricks or stones by injection.

AVAILABILITY FOR COMPRESSIVE STRENGTH

R5 ≥ 5 N/mm^2
R10 ≥ 10 N/mm^2

APPLICATION

- To perforate by injection with a diameter between 15 and 25 mm.
- For very permeable masonries make the perforations each 40/50 cm, for compact walls make the perforations every 20 / 25cm. The perforations should have a depth of about 2/3 of the thickness of the walls.
- For a wall thickness up to 60 cm to perform the perforations on one side of the walls.
- For a wall thickness exceeding 60 cm perform the perforation on both sides of the walls.
- Perforate with an inclination of about 45°.
- Completely soak the walls to be consolidated with INTOCALCE IN through the injection holes.
- Wait for 24 hours to perform the injection in such a way that there are no phenomena of stagnant water inside the masonry.
- With decorations, frescoes or substrates particularly sensitive to moisture, avoid wetting to saturation.
- Place in each hole to a depth of about 10 cm plastic tubes of length between 30 / 40cm and a diameter of 15 / 20mm., to fix with RAPIDOCEM.
- To mix just with clean water with a mixer at low speed until when the mixture isn't fluid and without lumps or with a mixer with pressure regulation by injection, regulating the flow-meter until when the density isn't perfect.
- The injection pressure must be min 1 bar max 2.5 bar.
- Be especially careful to avoid the formation of air bubbles during mixing and application.
- Once performer the injections and before plastering, remove the tubes and the mortar used for fixing.
- Is recommended to perform the injections always bottom up.
- Don't apply on frozen substrates, with frost or possible frost in 24 hours.
- Don't add any other material to the product.
- We suggest to apply INTOCALCE IN with a temperature between + 5 ° C and + 30 ° C.

INTOCALCE IN

PACKAGING
Multi-ply paper sacks with protective film of kg. 25 on wood pallets 17,50 ql. (70 sacks).

YIELD
1,8/1,9 kg par lt of volume to fill.

TECHNICAL SPECIFICATIONS COMPLIANT WITH UNI EN 998-1

Water content of the mix	~24-25,5%
Grading EN 1015-1	≤ 0,3 mm
Specific weight EN 1015-10	1.600 kg/m^3 ± 5%
Plastic shrinkage in cond. Termoigr. Standard	Absent
Workability time EN 1015-9	1 hour
Compressive strength type R5 at 28 days EN 1015-11	≥ 5 N/mm^2 (CSIII)
Flexural strength type R5 at 28 days EN 1015-11	≥ ≥ 2 N/mm^2
Compressive strength type R10 at 28 days EN 1015-11	≥ 12 N/mm^2 (CSVI)
Flexural strength type R10 at 28 days EN 1015-11	≥ 4,2 N/mm^2
Water vapor diffusion resistance factor EN 1015-19	μ ≤ 20
Emptying time of Coppa Ford (D6):	<30sec
Water absorption coeff. due to capillary action EN 998-1	Class "W0"
Reaction to fire EN 9981-1	Class "A1"
Thermal conductivity EN 1745 p.A.12	$\lambda_{10,dry,mat}$ =0,50 W/mk
Durability	NPD
Toxicity - Regulation CE 1272/08	Danger
Classification UNI EN 998-1:2010	GP-CSIII-W0/DOP nr. 221

SUMMARY
Il restoration and the reinforcement of historical masonries in tuff, bricks or stones by injection using injection machines will be done with an eco-friendly bio-mortar based on natural hydraulic lime NHL 5 or NHL 3,5 compliant with EN 459-1 cement-free, with a super fluid consistence specific, sulphate resistant so it is suitable with mortars and historical masonries, type "INTOCALCE IN" by MALVIN S.r.l., applied by hand or mechanically and to mix just adding water with a consumption of 1,8/1,9 kg per lt of volume to fill, with a compressive strength after 28 days ≥ 5 N/mm^2(CSIII).

The performance characteristics refer to laboratory tests, values depend on the weather conditions and on the methods of implementations. The operator must verify the suitability of the product depending on the use planned.

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