

B-STRUCTURA INIEZIONE OPUS

The mixture for injections B-STRUCTURA INIEZIONE OPUS is composed of pure, high-strength, white NATURAL HYDRAULIC LIME, produced by using selected siliceous limestones and metakaolin. The firing of the limestones takes place in vertical ovens at a temperature below 1250 ° C and reduced to powder by only extinguishing the calcium oxide, without the need for grinding. The NHL 5 binder is totally free of pozzolanic materials, blast furnace slag, fly ash or hydraulic binders of any kind (clinker, cement, etc.), VOC and complies with the UNI EN 459-1 standard.

- Dehumidifying
- Environment Friendly
- Slag Free
- Chromium-Free
- Restoration
- Breathable
- Resistant
- Cement Free
- Versatile
- Recyclable
- Without Ashes
- Healthy
- Anti-Condensing
- Anti-Mould
- NHL 5
- Highly Adhesive
- Pollution Resistant
- Consolidating Treatment



Features

The porosity of the NHL5 Natural Hydraulic Lime binder guarantees a high diffusion of water vapor, confers breathability to the substrate, allows the disposal of absorbed water and regulates environmental humidity avoiding the formation of harmful condensation and mold. The high basicity of the mixture whose pH is equal to 12.5 makes the surfaces unassailable by biodeteriogenic agents and prevents their proliferation, creating hostile conditions for the survival of pathogenic microorganisms (bacteria, fungi, viruses) which cause infections, diseases or allergic reactions.

The use of Pure Natural Hydraulic Lime NHL 5 and metakaolin for the production of the fluid mixture for injections B-STRUCTURA INIEZIONE OPUS, makes the product biocompatible in full respect of man and the environment. The total absence of salts, chemicals, volatile organic compounds combined with the total mineral nature of the components, guarantees purity, non-toxicity, non-harmfulness and total recyclability. The peculiar characteristics of the B-STRUCTURA INIEZIONE OPUS mixture, such as the slow hardening process, the continuous increase in mechanical strength over time, combined with a low modulus of elasticity give elasticity to the consolidated artifacts, differentiating it from cementitious or resinous ones. The use of NHL 5 allows you to operate in perfect affinity with the rules of the ancient art of building typical of Restoration as well as in green building.

Fields of Application

The B-STRUCTURA INIEZIONE OPUS fluid mixture is used directly on site for the consolidating injection of masonry. The injection can be carried out by percolation or with the use of low pressure pumps through the use of special tubes.

Application

Make the perforations as per project. Normally we recommend a net of holes with a pitch of 50 cm both horizontally and vertically staggered in order to obtain a series of rhombuses. Diameter of the perforations from 16 to 25 mm in diameter depending on the substrate to be consolidated. Depth of injections equal to at least 2/3 of the wall thickness up to 90% of the thickness. Installation of injection cannulas to a depth of about 5cm and sealing. Washing of the perforations with clean water. When the masonry is still wet, injection of the B-STRUCTURA INIEZIONE OPUS mixture. The injection must be carried out from the bottom upwards and from the outside towards the interior of the wall faces. Continue to inject until the perforation is completely saturated. Evaluate the injection pressure based on the type of wall. It is recommended to work at low pressure (0.5-1.5 atm).

Items Specifications

Consolidation injection of the masonry matrix with biocompatible mixture B-STRUCTURA INIEZIONE OPUS, pre-packaged in powder for interiors and exteriors. B-STRUCTURA INIEZIONE OPUS is totally free of cement and compounds belonging to the clinker group and consists of a mixture of pure calcareous sands, screened with a fine granulometric arc with SAINT-ASTIER Pure Natural Hydraulic Lime NHL 5 compliant with the UNI EN standard 459-1 and metakaolin. Lime NHL 5, white in color, is produced by firing siliceous limestones at temperatures below 1250 ° C and reduced to powder by simply quenching the calcium oxide, without the addition of pozzolanic materials or hydraulic binders of any nature, having the following control parameters: free lime content not less than 19% (UNI EN 459-2 4.7), density of 0.77 (UNI EN 459-2 5.8) and a mechanical compressive strength after 28 days of not less than 10 , 2 Mpa (UNI EN 459-2 5.1).

Warnings

- Product for professional use.
- Do not modify the product.
- Store the product in a dry place, in its original closed packaging.
- Before using the product, consult the safety data sheet.
- The data shown correspond to the technical and application knowledge in our possession for an appropriate use of the product, therefore we recommend carrying out a preliminary practical test in order to verify the suitability of the product for its intended use and consumption.
- Protect surfaces from atmospheric phenomena, sun, wind, rain and frost.
- Since our company is not the executor of the works and not being able to intervene directly on the conditions of the construction sites and on the methods of execution of the works, the indications given are to be considered of an indicative and general nature, therefore not binding for the same.
- The company reserves the right to make any changes it deems necessary at any time and without notice.
- For further information and practical demonstrations relating to the products consult our technical service.
- Always refer to the updated versions of the technical data sheets available on the website www.tcs-srl.it.

Technical Data

PRODUCT TYPE: Mixture of Pure Natural Hydraulic Lime NHL 5 and metakaolin complying with the standard UNI EN 459-1 for injections

CLOURS light brown

CHEMICAL ANALYSIS CaO 59%; SiO₂ insoluble: 5.6%; SiO₂ combined: 15%;

Al₂O₃ 1.92%; Fe₂O₃: 0.57%; SO₃: 0.41%; MgO: 1.01%;

MnO 0.02%; TiO₂: 0.18%; K₂O: 0.21%; Na₂O: 0.07%

pH OF THE MIXTURE > 12.5

FRESH MORTAR APPARENT DENSITY (EN 1015-6) 1700 kg/m³

DRIED MORTAR APPARENT DENSITY (EN 1015-10) 1210 kg/m³

APPARENT DENSITY IN PILE 880 kg/m³

Ca(OH)₂ 22%

COMPRESSIVE STRENGTH 28 DAYS (EN 1015-11) 6.3 MPa

FLEXURAL STRENGTH 28 DAYS (EN 1015-11) 2.13 Mpa

ADHESION (EN 1015-12) 0.5 N/mm² - FP-B

WATER VAPOUR PERMEABILITY COEFFICIENT (EN 1015-19) $\mu < 15$

FLAME RESISTANCE (EN 13501-1) A1

MIXING WATER 10 l for each sack

CURING TIME 4 h

PACKAGING 20 kg sack

PALLET 72 bags, 1440 kg

STORAGE keep in dry place for 18-24 months in original package

APPLICATION TEMPERATURE from +5°C to +32°C

REACH CLASSIFICATION See SDS