ECO-CAL

ECO-CAL is a Biocompatible Eco Plaster, pre-packaged powder for interior and exterior use according to UNI EN 998-1. ECO-CAL is totally free of cement and compounds belonging to the clinker group. It is made up of a mixture of pure silicone calcareous sands with a continuous grain size arc from 0 to 1.4 mm. The only present binder is the SAINT-ASTIER Pure Natural Hydraulic Lime NHL5 according to UNI EN 459-1. The lime NHL 5, white, is produced by baking siliceous limestones at temperatures below 1250°C and reduced in powder by only the break down of calcium oxide, without the addition of pozzolanic materials or hydraulic binders of any kind.

- Dehumidifying
- Environment Friendly
- Radon Free
- Breathable
- Resistant
- Cement Free
- Versatile
- Recyclable
- Healthy
- Antibacterial
- Anti-Condensing
- Anti-Mould
- Quick
- Reversible
- Easy
- Green Building
- Pollution Resistant

Features

ECO-CAL is a pre-packaged powder, biocompatible, free of salts, chemical products and volatile organic compound (VOCs) plaster. These features, combined with the total mineral nature of the components, guarantee the purity, non-toxicity, non-harmfulness and the total recyclability of the product in full respect for man and the environment.
The use of ECO-CAL makes the plasters eco-friendly, biocompatible and reversible, giving high breathability to the substrate on which it is applied, avoiding the formation of dangerous condensation and bacterial proliferation by regulating the ambient humidity and carbon dioxide content of the environments.

Fields of application

ECO-CAL is specially designed for the construction of new constructed plasters where, as a rule, the thicknesses are constant and contained. It is therefore recommended for an application not exceeding 2.5 cm directly on vertical and horizontal surfaces made up of bricks of solid, perforated, lightweight bricks, mixed brick, stone, tuff and hemp blocks or surfaces. For all those compact or poorly absorbent surfaces (solid blocks or concrete cables and expanded clay pebbles, concrete block cells, lime or cement based substrates, reinforced concrete structures, magnesium wood) the use of ECO-CAL will have to be preceded by the application of SPRIZZO PONTE DI ADESIONE.

Applicazione

The laying of biocompatible ECO-CAL plaster must be preceded by the preparation of the substrate that will be suitably wet. In case the surface is compact or slightly absorbent (R.C., cell or concrete blocks, expanded clay, magnesium wood, etc.) the application must be preceded by SPRIZZO PONTE DI ADESIONE.

ECO-CAL can be applied using a conventional peristaltic pump or screw plastering machine (stator/rotor D6-3 PFT).
In case of application with a plastering machine the pipe length must not exceed 20 m and the prevalence must not exceed 6 m. ECO-CAL is pre-packaged and is mixed only with about 5-6 l of water per bag depending on the desired consistency.

The application thickness should not exceed 1 cm per single coat, with a maximum application of about 2.5 cm. When applying multiple layers, wait until the previous one has lost a large part of the mixture water and the surface is not compact. To make planar surfaces you need to proceed to the levelling with an aluminium straight edge and finish them floating with plastic/wood floats or scraping by planing.

If the previously applied ECO-CAL layer is already dry, you will proceed with adequate wetting of the substrate before applying the next layer. This operation will allow keeping the new layer workable and will ensure perfect adhesion to the underlying layer. In order to contain any cracking phenomena which may occur in the zones of geometrical discontinuity or the nature of the substrate it is recommended to place an alkali resistant fibreglass mesh TCS GLASS CK 100. The mesh will be laid in the last cm of the plaster.

The application of the smoothing coat INTOCIVILE, in the 0.0 0.4 and 0.8 Naturale or Bianco Botticino versions, may take place after proper curing of the substrate, averaging 2-3 days each applied cm. These timings may vary due to the application temperatures and atmospheric conditions.

ECO-CAL plasterwork must be separated from the walkway surfaces (sidewalks, roads, terraces), from areas where water stagnation and contact with the soil may occur (meadows, flower beds, sand or gravel substrates for self-blocking screeds of cement or natural stone) in order to prevent the emergence of the capillary ascension phenomenon in the plaster body which would cause the formation of superficial stains and the consequent early degradation of the surface.

Finishes

The use of a product of the TCS Finishing Line makes up the natural completion of a compatible cycle to the substrate, particularly with regard to the characteristics of breathability and permeability. The use of the TCS Finishing Line products, made of Lime putty CL 90 or Potassium Silicate, is the obligation to fulfil the expectations of aesthetic and performance features at the basis of the TCS product choice.
In case you decide to leave the ECO CAL plaster natural it is recommended to apply a water-proof protection type TI-10 or TI 10 PLUS of TCS Protection Line.

Warnings

- Product for professional use.
- Do not modify the product.
- Store the product in a dry place in the original sealed packages.
- Before using the product refer to the Safety Data Sheet.
- The data given correspond to the technical and application knowledge we have for proper use of the product, so it is recommended to carry out a practical test prior to in order to verify the suitability of the product for its intended use and consumption.
- Protect the surfaces from atmospheric phenomena, sun, wind, rain and frost.
- Since our company is not the executor of the works and can not intervene directly on the construction site conditions and on the methods of work execution, the indications given are to be considered as indicative and general, and therefore not binding for the same.
- The Company reserves the right to make the changes at any time without notice when it deems necessary.
- For more information and practical product demonstrations please consult our technical service.
- Always refer to the updated versions of the technical data sheets available at www.tcs-srl.it.

Dati Tecnici

PRODUCT TYPE: Mortar for general purposes (GP) for internal and external use complying with the standard UNI EN 998-1

GRAIN SIZE CURVE (EN 1015-1) 0 - 1.4 mm

pH OF THE MIXTURE > 12.5

FRESH MORTAR APPARENT DENSITY (EN 1015-6) 1820 kg/m³

DRIED MORTAR APPARENT DENSITY (EN 1015-10) 1600 kg/m³

APPARENT DENSITY IN PILE 1312 kg/m³

COMPRESSIVE STRENGHT (EN 1015-11) Category CS II

FLEXURAL STRENGHT (EN 1015-11) 0.90 N/mm²

ADHESION (EN 1015-12) 0.35 N/mm² FP-B

WATER VAPOUR PERMEABILITY COEFFICIENT (EN 1015-19) μ < 15

WATER ABSORPTION THROUGH CAPILLARITY (EN 1015-18) W0

INITIAL SETTING TIME AT 20°C 65% U.R. 9 h

FINAL SETTING TIME AT 20°C 65% U.R. 12 h

THERMAL CONDUCTIVITY (EN 12667) lambdaD 0.54 W/(mK) (tabulated value)

FLAME RESISTANCE (EN 13501-1) A1 class

MIXING WATER 5-6 l per bag

CONSUMPTION 14 Kg/m² about fhickness

THICKNESS PER COAT 1 cm

PACKAGING 25 kg bag

PALLET 48 bags, 1200 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