

HEMPANEL PANNELLO IN CANAPA D100

THE NATURAL EVOLUTION OF THE COAT SYSTEM Composite system for external and internal thermal insulation of buildings with a HEMP fibre panel. Combining innovation with tradition, the TCS SYSTEM is the evolution of external thermal, acoustic and energy insulation systems. Highly breathable and completely natural for high living comfort. TCS SYSTEM consists of an approximately 100 kg/m³ single-density, non-combustible, breathable insulation panel made of HEMP fibre, with a thermal conductivity of 0.039 W/(mK). The skimming adhesive of TCS SYSTEM is ADE RAS: a pre-packaged biocompatible skimming adhesive in powder form for indoor and outdoor use in compliance with UNI EN 998- 1. ADE RAS is totally free of cement and compounds belonging to the clinker group. It consists of a mixture of pure silicatic calcareous sands, screened with a continuous grain size range from 0 to 0.6 mm. The only binder present is SAINT-ASTIER's Pure Natural Hydraulic Lime NHL 5 conforming to UNI EN 459-1.



- Slag Free
- Chromium-Free
- Restoration
- Breathable
- Resistant
- Cement Free
- Versatile
- Antibacterial
- Anti-Condensing
- Anti-mould
- NHL 5
- Quick
- Light
- Reversible
- Easy
- Green Building
- Pollution Resistant

Features

As Natural Hydraulic Lime is a strong hygroregulator, it manages excess internal and external moisture in a totally natural way and offers high resistance to bacterial growth and mould. TCS SYSTEM ensures total compatibility with the requirements of the Firefighters Guideline for fire safety of facades in civil buildings, being totally mineral and containing no petroleum-derived products.

Fields of Application

With the TCS SYSTEM, the building is able to guarantee excellent management of water vapour diffusion, preventing the formation of harmful mould and condensation and ensuring a healthy environment. All this is possible thanks to the combination of the three-dimensional, breathable and water-repellent HEMP fibre panel with the special ADE RAS skimming adhesive composed only of NHL 5 Pure Natural Hydraulic Lime. The three-dimensional fibrousness of the panel provides greater protection against external noise.

Application

For the correct application of the TCS SYSTEM, the dedicated TCS installation manual must be strictly adhered to.

Finishes

The use of a product from the TCS Finishes Line constitutes the natural completion of a cycle compatible with the substrate, particularly as regards the characteristics of breathability and permeability. The use of products from the TCS Finishes Line, composed of slaked lime CL 90-S PL or potassium silicate, are the obligatory choice to realise the performance and aesthetic expectations underlying the choice of TCS products. If you decide to leave the ADE RAS skim coat natural, we recommend the application of a water-repellent protective coating such as TI 10 or TI 10 PLUS from the TCS Protective Line.

Items Specifications

Thermal insulation using TCS SYSTEM composed of rigid hemp panels for the creation of thermal coats with the following characteristics: Average apparent specific weight 100 kg/m³, Thermal conductivity 0.039 W/(m.K) EN 13162, Specific thermal capacity 1700 J/(kgK), Diffusion coefficient μ 3.9 EN 12086, Reaction to fire B2 DIN 4102, Fire behaviour Class E (DIN 13501-1), 100% recyclability. The Hemp Panels shall be laid with ADE RAS Mineral Skimming Adhesive, pre-packaged in powder form for indoor and outdoor use, in compliance with standard UNI EN 998-1 General purpose mortar (GP), with the following control parameters: pH of the mix > 12.5, density of the dried mortar kg/m³ 1400, compressive strength (1015-11) CSII, water vapour diffusion coefficient (EN 1015-19) 10, adhesion (EN 1015-12) 0.6 N/mm² FP-B, water absorption by capillarity W0, thermal conductivity 0.47 W/mK Tabulated, reaction to fire (EN 13501-1) Class A1. The TCS GLASS CK 155 reinforcing mesh to be used between the two coats of skim coat applied with ADE RAS must comply with the following control parameters: Weight of the Grey Fabric 138 g/m², Weight of the Sized Fabric > 150 g/m², Elongation at break > 3.5%, Tensile Strength Warp 42.64 N/mm, Tensile Strength Weft 39.34 N/mm, Reaction to fire Class F (EN 13501-1), mesh size 4x4.5 mm. For wind resistance and mechanical fixing, TASSELLO TCS of the appropriate length CE marked in categories A-B-C-D, according to ETAG014 will be used. The finishes to complete the TCS SISTEMA PRO cycle, after applying KAPPASIL RIEMPITIVO levelling primer, can be chosen from CL 90-S PL STORICAL TONACHINO 1.1 Lime finish with subsequent surface hydrophobisation carried out with TI10 or KAPPASIL TONACHINO 1.1 Potassium Silicate finish.

Warnings

- Product for professional use.
- Do not modify the product.
- Store the product in a dry place, in the original unopened packaging.
- Consult safety data sheet before using the product.
- The data given correspond to the technical and applicative knowledge in our possession for an appropriate use of the product. We therefore recommend carrying out a prior practical test in order to check 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 cannot directly intervene on site conditions and the methods of execution of the works, the indications given are to be considered indicative and general, and therefore not binding for the same.
- The company reserves the right to make any changes it deems necessary at any time and without prior notice.
- For further information and practical product demonstrations, please consult our technical service.
- Always refer to the latest versions of the technical data sheets available at www.tcs-srl.it.

Technical Data

PRODUCT TYPE: Hemp fibre panel

PANEL DIMENSION 800x1200 mm

THICKNESS from 20 mm a 240 mm

THERMAL CONDUCTIVITY (EN 13162) 0.039 W/(mK)

SPECIFIC HEAT CAPACITY 1700 J/(kgK)

FLAME RESISTANCE (EN 13501-1) Class E

DENSITY 100 (kg/m³)

SPECIFIC HEAT (EN 12524) 1700 J/(kgK)

MATERIAL hemp fibre, PES, corn starch

REACTION TO FIRE CLASS (DIN 4102) B2

RECYCLABILITY: 100%

RESISTANCE TO WATER VAPOUR TRANSMISSION (UNI EN 12086): μ 3,9

FLAME RETARDANT (<1%): ammonium salts

PACKAGING Packages on pallets covered with polyethylene film

STORAGE In the original packaging in a dry place