

PANNELLO IN LANA MINERALE MWD

THE EVOLUTION OF THE PRO SYSTEM Composite system for external and internal thermal insulation of buildings with MW Rockwool panels. Combining innovation with tradition, SISTEMA PRO is the evolution of external insulation systems for thermal and acoustic insulation and energy adaptation. Highly breathable and completely natural for high living comfort. SISTEMA PRO consists of a mono-density, approx. 80 kg/m³, non-combustible, breathable rockwool insulation panel with a thermal conductivity of 0.034 W/(mK). The skimming adhesive of SISTEMA PRO 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
- Resistant
- Cement Free
- Versatile
- Antibacterial
- Anti-Condensing
- Anti-Mould
- NHL 5
- Quick
- Light
- Reversible
- Easy
- Green Building
- Pollution Resistant
- Consolidating Treatment
- Waterproof

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 SISTEMA PRO, the building is able to guarantee excellent water vapour diffusion management, 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 rockwool panel with oriented fibres and 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 from external noise. The stability of the rockwool panel and the ADE RAS skimming compound guarantees a solid and durable façade, even with dark colours.

Application

For the correct installation of TCS SISTEMA PRO, the dedicated application manual published by TCS 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 Finishes Line.

Items Specifications

Execution of Thermal Insulation with TCS SYSTEM composed of rigid mono-density rock wool panel for the realisation of thermal coats with the following characteristics: Apparent specific weight 100 kg/m³ EN 1602, Thermal conductivity 0.036 W/(m.K) EN 13162, Specific thermal capacity 800 J/(kg. K), Diffusion coefficient μ 1 EN 12086, Reaction to fire A1 Euroclass EN 13501-1, Short-term water absorption $W_p \leq 1$ kg/m² EN 1609, Air flow resistance referred to length 21.8 kPa.s/m² EN 29053, Compressive stress with elastic deformation of 10 % ≥ 50 kPa EN 826.

Rockwool panels must be laid with ADE RAS Mineral Skimming Adhesive, pre-packaged in powder form for internal and external 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 ADE RAS smoothing compound must comply with the following control parameters: Weight of the unbleached fabric 138 g/m², Weight of the dressed fabric > 150 g/m², Elongation at break > 3.5%, Tensile strength at break Warp 42.64 N/mm, Tensile strength at break Weft 39.34 N/mm, Reaction to fire Class F (EN 13501-1), mesh size 4x4.5 mm. For wind resistance and mechanical fixing, TCV BOLT of the appropriate length CE marked in categories A-B-C-D, according to ETAG014 will be used. The finish to complete the TCS SISTEMA PRO cycle, after applying KAPPASIL RIEMPITIVO levelling primer, may be chosen from the CL 90-S PL STORICAL TONACHINO 1.1 Lime finish with subsequent hydrophobic treatment of the surface using 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: MWD wool monodensity panel

PANEL DIMENSION 600x1200 mm

THICKNESS from 40 mm up to 200 mm

AVERAGE DENSITY Available with density 90 kg/m³, 100 kg/m³ or 130 kg/m³

THERMAL CONDUCTIVITY (EN 13162) 0.036 W/(m*K)

DIMENSIONAL STABILITY UNDER SPECIFIC CONDITION OF TEMPERATURE AND HUMIDITY (EN 1604) < 1%

FLAME RESISTANCE (EN 13501-1) A1

SHORT-TERM WATER ABSORPTION (EN 1609) < 1 kg/m²

THICKNESS TOLLERANCE (EN 13162) T5

MOISTURE RESISTANCE FACTOR EN 12086 μ 1

COMPRESSIVE STRENGTH WITH A 10% DEFORMATION (EN 826) > 50 kPa

SPECIFIC HEAT (EN 12524) 800 J/(kg*K)

TECHNICAL DATA - ENVIRONMENTAL PRODUCT DECLARATION (REF. DM 11/10/2017):

ARTICLES 2.4.1.2/2.4.2.9 - PERCENTAGE BY WEIGHT OF RECYCLED MATERIAL (>15%) > 30%

ARTICLE 2.4.1.3 - OZONE-DEPLETING SUBSTANCES absent

ARTICLE 2.4.2.9 - HAZARDOUS SUBSTANCES

According to REACH, MWD DK wool is an 'Article' and according to EU Regulation 1272/2008 on classification, labeling and packaging of substances and products, it is not classified as hazardous.

ARTICLES 2.3.5.6 / 2.3.5.7 - THERMAL AND ACOUSTIC INSULATION (VARIOUS REQUISITE)

Compliance with individual requirements **PACKAGING** packages on pallets covered with polyethylene film **STORAGE** in the original packaging in a dry place
