CLIMATHERM AR

CLIMATHERM AR is a pre-packaged, biocompatible, insulating, dehumidifying Eco-Plaster in powder form for interiors and exteriors, compliant with the UNI EN 998-2 standard with high resistance. CLIMATHERM AR is completely free of cement or compounds belonging to the clinker group. It is made up of a mixture of pure, low-specific-weight expanded mineral sands, sifted with a continuous granulometric arc from 0 to 4 mm. The only binder present is the Pure Natural Hydraulic Lime NHL 5 by SAINT-ASTIER compliant with the UNI EN 459-1 standard. The white NHL 5 lime is produced by cooking siliceous limestones at temperatures below 1250°C and reducing them to powder by simply slaking the calcium oxide, without adding pozzolanic materials or hydraulic binders of any kind.

- Dehumidifier
- Ecological
- Chromium free
- Restoration
- Breathable
- Resistant
- Cement free
- Versatile
- Recyclable
- Healthy
- Antibacterial
- Anti-condensation
- Anti-mold
- NHL 5
- Fast
- Light
- Easy
- Green building

Characteristics

CLIMATHERM AR is an insulating, dehumidifying plaster, pre-packaged in powder, biocompatible, free of salts, chemicals and volatile organic compounds (VOC). These characteristics, combined with the total mineral nature of the components, guarantee the purity, non-toxicity, non-harmfulness and total recyclability of the product in full respect of man and the environment. The expanded minerals, with a low specific weight, that make up CLIMATHERM AR have a cellular structure characterized by micro cavities. This structure gives the material insulating power, reducing heat transmission, as well as sound-absorbing capabilities. The use of CLIMATHERM AR makes the plasters ecological, biocompatible and reversible, giving high breathability to the support on which it is applied, avoiding the formation of harmful condensation and bacterial proliferation, regulating the humidity of the rooms.

Fields of application

CLIMATHERM AR is specific for the formation of insulating and dehumidifying plasters on new and old walls, for low and high thicknesses from 2 up to over 15 cm. Easily workable with the techniques traditionally used in the application of lime plasters. CLIMATHERM AR can be applied directly on vertical and horizontal surfaces made of solid bricks, perforated load-bearing bricks, lightweight perforated bricks, mixed bricks, stone and tuff. For all those compact or poorly absorbent surfaces, such as solid or hollow blocks of cement conglomerate and expanded clay granulates, cellular conglomerate blocks, lime or cement-based supports, reinforced concrete or magnesian wood structures, the use of CLIMATHERM AR must be preceded by the application of SPRIZZO PONTE DI ADESIONE.

Application

The installation of CLIMATHERM AR must be preceded by the preparation of the substrate: if the surface is compact or not very absorbent, the application must be preceded by SPRIZZO PONTE DI ADESIONE; for walls affected by rising damp, the use of SPRIZZO ANTISALE is recommended. The substrate, if dry, must be suitably wetted with the exception of surfaces already treated with SPRIZZO ANTISALE roughcast mortar.

CLIMATHERM AR can be applied using a traditional peristaltic pump or a screw and lung plastering machine (stator/rotor D8-1.5 PFT). In the case of application with a plastering machine, the length of the pipe must not exceed 20 m and the head must be a maximum of 6 m. CLIMATHERM AR is pre-packaged and must be mixed only with water at a rate of approximately 10-11 l per bag depending on the desired consistency.

The application thickness should not exceed 3-4 cm per coat. If you have to apply multiple layers, wait until the previous one has lost a good part of the mixing water and the surface is not compact. To make the surfaces flat, proceed with leveling with an aluminum straight edge and finish them by trowelling with a plastic/wooden trowel or scraping by rabbing.

If the previously applied CLIMATHERM AR layer is already dry, proceed with adequate wetting of the substrate before applying the next layer. This operation will allow the new layer to be kept workable and will guarantee perfect adhesion to the underlying layer. In order to contain any cracking phenomena that may occur in correspondence with the areas of geometric discontinuity or the nature of the substrate, it is recommended to lay an alkali-resistant TCS GLASS CK 100 fiberglass mesh. The mesh should be laid in the last cm of plaster. The application of the INTOCIVILE skim coat, in the variants 0.8 Natural or Bianco Botticino, can take place after the substrate has properly matured, calculating on average 2-3 days for each cm applied. These times may vary according to the temperatures and application conditions.

Plasters obtained with CLIMATHERM AR must be separated from walking surfaces (sidewalks, roads, terraces), from areas where water stagnation may occur and from contact with the ground (lawns, flowerbeds, sub-bases made of sand or gravel for self-locking cement or natural stone screeds) in order to prevent the triggering of the capillary rising damp phenomenon in the body of the plaster which would cause the formation of surface halos and the consequent early degradation of the applied finishes.

Finishes

The use of a product from the TCS Finishing Line is the natural completion of a cycle compatible with the support, particularly with regard to breathability and permeability characteristics. The use of products from the TCS Finishing Line, composed of CL 90 Lime Putty or Potassium Silicate, are the obligatory choice to realize the performance and aesthetic expectations underlying the choice of TCS products.

If you decide to leave the CLIMATHERM AR plaster natural, we recommend applying a water-repellent protector such as TI 10 or TI 10 PLUS from the TCS Protection Line.

Warnings

- Product for professional use.
- Do not modify the product.
- Store the product in a dry place, in the original closed packaging.
- Before using the product, consult the safety data sheet.
- The data reported correspond to the technical and applicative knowledge in our possession for appropriate use of the product, therefore it is recommended to carry out a preliminary practical test in order to verify the suitability of the product in relation to its intended use and consumption.
- Protect surfaces from atmospheric phenomena, sun, wind, rain and frost.
- The indications given, as our company is not the executor of the works and cannot intervene directly on the conditions of the construction sites and on the methods of execution of the works, are to be considered indicative and general, 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:Mortar for general purposes (G) with guaranteed performance for use on masonry, walls, columns and partitions compliant with UNI EN 998-2

TECHNICAL DATA		
Property	Um	Value
EN 1015-1 grain size curve	mm	0 - 4
pH of the dough	pH	> 12.5
Apparent density of fresh mortar EN 1015-6	kg/m³	average 650-730
Apparent density of dried mortar EN 1015-10	kg/m³	average 400
Bulk density in pile	kg/m³	average 348
Compressive strength EN 1015-11:	-	M1
Flexural strength EN 1015-11:	N/mm²	0.60
EN 1015-12 compliance	-	-
Water vapour diffusion resistance coefficient EN 1015-19	μ	< 6
Capillary water absorption EN 1015-18	Kg / (m2 x min 0.5)	C 0.4
Setting time at 20°C 65% RH	-	-
End of setting time at 20°C 65% RH	-	-
Thermal conductivity EN 1745:2002 table A 12	W/(mK)	0.057
Air content in fresh mortar EN 1015-7	-	-
Specific heat EN 12524	J/(kg*K)	1000
Sound absorbing	-	Rw 37dB substratigraphy composed of Climatherm 3cm, perforated brick planking 8cm, traditional plaster 1.5cm
Reaction to fire EN 13501-1	Class	A1
Mixing water	lt	11 per bag
Consumption	kg/m2	About 4 for 1cm thickness
Applicable thickness per layer	cm	3-4

STORAGE AND PACKAGING	
Packages	17kg bag
Pallet	48 bags, 816 kg
Conservation	18-24 months in original packaging in a dry place
Application temperature	from +5°C to +32°C
Reach Classification	See SDS