

ETRON HYBRID

SCHEDA TECNICA

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Prodotto: **ETRON HYBRID**

Categoria: Linea ETRON

Azienda: Loggia

General Characteristics

ETRON FIBRE DI CARBONIO HYBRID is a single-component fluid membrane reinforced with synthetic fibers and carbon fibers and the addition of carbon nanofibers (nanotubes) which forms a super-resistant, waterproofing and anti-stagnation structure. Formulated with selected styrene-acrylic resins, pigments resistant to UV rays and specific additives, ETRON HYBRID has excellent elasticity and exceptional resistance to biodeterioration.

The product has a unique silanization technology of its kind able to guarantee:

- Excellent adhesion to difficult substrates.
- High resistance to photochemical degradation.
- High resistance to biochemical deterioration
- Tileable with the use of suitable adhesives.
- The formation of a membrane resistant to hydrolytic degradation that is, the long-term resistance to total / partial immersion in water.

The great innovation introduced in ETRON HYBRID is the introduction of carbon fibers and carbon nanotubes that generate a difference in electrical potential which also gives it long-term endogenous protection against biodeterioration. It is a natural phenomenon that occurs when substances with biochemical degradation activities (for example bird droppings) are deposited on the membrane, which attack the organic components of the membrane. Carbon fibers and carbon nanotubes are subjected to surface pretreatments, this allows a greater bond strength with the polymeric matrices compared to traditional fibers used on the market. For proper maintenance of Etron Hybrid, it is advisable to wash it with water at least once a year if the buildings are located in industrial or particularly polluted areas.

Application

Suitable for waterproofing balconies, terraces and bathrooms and all surfaces that are subject to water infiltration, where excellent resistance to trampling is required. The presence of the synthetic fibers of the carbon nanotubes improve the structural properties of the sheath without the need for the laying of additional reinforcing structures.

Preparation of the surface



In the case of treatments of old and damaged surfaces, as a preliminary operation, it is necessary to remove all traces of vegetation, moss and dirt in general, washing the entire surface with a high pressure washer and treating the entire flooring with hydrochloric acid to eliminate microorganisms and organic residues, especially of vegetal origin, which could cause a premature deterioration of the sheath.

Apply only to dry, clean and efflorescence-free surfaces. The surface must be solid and not crumbling and, before applying the product, any holes present must be sealed. If installing on a cement-based mineral base or on old bituminous sheaths, first apply ready-to-use MICROPRIMER TECNICO H2O. In the presence of detached bituminous sheaths it will be necessary to remove them and restore them or, if possible, re-weld them. For recently laid bituminous membranes, however, it is necessary to wait at least 180 days before applying ETRON HYBRID, or a minimum of 30 days provided that the entire surface is treated with a steel brush. This is to prevent the plasticizers released by the bitumen from hindering the anchoring of the liquid sheath. However, it is always recommended to carry out an adhesion test before the work.

Tiled flooring. Reweld the loose tiles, restore the grouting of the joints if missing, degrease the entire surface, sand to remove dirt and/or traces of substances not removed by degreasing, finally, apply ETRON MICROPRIMER ATTAK as an anchoring primer.

Wooden surfaces. It is necessary that these are not damaged or weakened. Proceed with sanding to remove any flaking parts or dirt present on the surface, then apply a coat of MICROPRIMER TECNICO H2O anchor before applying the product. In the presence of slats it will be necessary to reinforce the product with 225 g/m² fiberglass mat, placing the same between the first and second coat and then finishing with a third to close the installation. Wood is an anisotropic material, with expansions of up to 10%, so it is essential to treat all the critical areas.

Metallic surfaces. Remove any rust and treat the surface with sandpaper. The product, due to its characteristics, adheres directly to metal surfaces and as a preparation base it is necessary to apply a first coat of ETRON HYBRID as a primer with a 10-15% dilution. Alternatively, however, it is recommended to apply a coat of anchoring primer Protection 1, Protection 2 or WB 600 (water-based epoxy primer) as a base before installing the product.

Application Methods



ETRON HYBRID is ready to use, but it is recommended to mix the material before use. The product can be applied with a spatula, brush or roller. After having prepared the surface and applied the suitable base according to the surface it is necessary to proceed with the treatment of the critical points such as concave corners, convex corners, nozzles, etc. Due to the mechanical resistance given by the carbon fibers and nanotubes, it is not necessary to use reinforcing strips in these points as it is possible to create them with the product itself, applying two coats of ETRON HYBRID in these areas, creating bands of 10-15 cm on both sides (example wall-floor: 10-15 cm on the wall and 10-15 cm on the floor). After carrying out this operation, it is necessary to apply three coats of ETRON HYBRID with a minimum dry layer thickness of approximately 0.5 mm each. Before applying a further coat, wait for the previous one to dry completely. The second hand must cross the first and the third the second. At the end of the application the thickness must not be less than 1.5 mm (approximately 2 kg/m²). It is important to protect the sheath from water until it is completely dry.

In case of forecast rain and in autumn/winter periods, use add the AXEL drying accelerator (dilute the product 5-7% before application).

Application temperature:	+5 ÷ +35	°C
Relative humidity of application:	<85%	
Recommended thickness:	0,6	µm per coat
Dust dry:	0,5	h
Repaintable after:	8	h
Deep dry:	18 (at 25°C)	h
Tool cleaning:	water	
Specific weight (without fibers):	1,37 ± 0,1	Kg/l
Viscosity (without fibers):	14000 ± 3000	cPs
pH:	8-9	
Dry residue:	72,5% ± 0,5%	
Elongation at break (ISO 37	? 300 %	
Theoretical yield:	2	Kg/mq
(waterproofing cycle as it is)		
Packaging	1 – 4 – 8 – 20	Kg
Color	White, Grey, Red ox, Green ox	
Appearance:	Matt	

Product compliant with laboratory tests, according to the requirements of the EN 14891: 2017 standard relating to liquid applied waterproofing products.

Performance characteristics	Test method	Minimum requirements according to EN 14891: 2017	Results
Initial tensile adhesion	A.6.2	$\geq 0,5$ N/mm ²	0,80 N/mm ²
Water impermeability	A.7	No penetration and weight gain ≥ 20 g	No penetration and weight gain
Crack-bridging capability under normal conditions (+ 23 ° C)	A.8.2	$\geq 0,75$ N/mm ²	7,44 N/mm ²
Durability by traction adhesion after thermal aging	A.6.5	$\geq 0,5$ N/mm ²	0,74 N/mm ²
Low temperature crack-bridging capability (-5 ° C)	A.8.3	$\geq 0,75$ N/mm ²	4,51 N/mm ²
Durability by traction adhesion after immersion in water	A.6.3	$\geq 0,5$ N/mm ²	0,50 N/mm ²
Durability by traction adhesion after freeze-thaw cycles	A.6.6	$\geq 0,5$ N/mm ²	0,52 N/mm ²
Durability per adhesion at traction after immersion in chlorine water	A.6.8	$\geq 0,5$ N/mm ²	2,13 N/mm ²
Exercise temperature			-20°C/+50°C

Storage: _____



Store the product in its packaging, in a dry place with a temperature between 5 and 35 ° C. Protect from frost. It has a shelf life of not less than 24 months.

Warnings

Do not apply at temperatures below 5 ° C and above 35 ° C. Do not apply on wet surfaces and subject to rising damp. Mix manually only. Apply only and exclusively on solid and not dusty surfaces. In case of rain between one coat and the other, wait for complete drying before the next installation.

N.B. It is essential, however, to evaluate the situation you are facing and, in certain conditions, it is necessary to provide additional or specific operations.

In the presence of supports and / or areas subject to strong expansion, structural or technical lesions such as expansion joints, longitudinal overlaps of old bituminous membranes laid on wooden roofs (material with significant volume expansion) it will be necessary, before laying Etron Hybrid, intervene in these points with preliminary operations. Cracked or dilated parts must be treated with high performance elastomeric sealants. Subsequently these areas, the joints and the longitudinal overlaps (as described above), it will be necessary to reinforce them with the laying of reinforcing fabric strips or mat in glass fiber 225 gr/mq capable of distributing the expansion tensions over an extended surface of at least 30-40 cm in width. The thickness of Etron Hybrid must be 3-4 mm in these points. Always consult our technical department in case of particular specifications and for all special situations not described in this technical data sheet.

Wear protective clothing when installing ETRON HYBRID. In case of submersion for prolonged periods of time in the presence of high concentrations of chlorine ions they tend to weaken the membrane more quickly. In these cases it is recommended to use ETRON SMALTO POOL and ETRON PLIPOOL which are formulated specifically for these conditions.

For all information relating to the handling of the product, as well as its correct disposal, please refer to the Safety Data Sheet.

Specifications:

ETRON HYBRID. One-component, fiber-reinforced fluid membrane with the addition of waterproofing and anti-stagnation carbon nanotubes ready for use, applicable with a spatula and brush. For the protection and waterproofing of surfaces exposed to extreme atmospheric agents or high humidity / stagnation of water and where excellent resistance to foot traffic is required. Can be applied with a spatula and brush for an estimated final consumption of 2 Kg / m2.

This data sheet is based on our best knowledge of the product. Not being able to exercise any type of control over the application of the product itself, and the possibilities of its use being multiple, Loggia Industria Vernici S.r.l. assumes no responsibility for the use of the product. For more information, contact the technical department. Furthermore, the technical data sheets may be subject to changes or updates, therefore, we recommend obtaining documents updated at the date of use of the material.

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