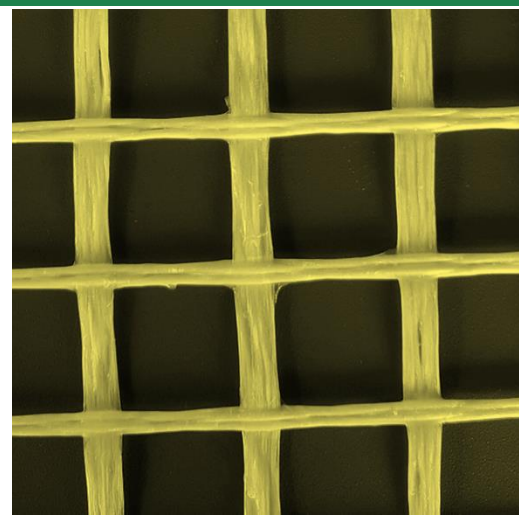
SISMANET 110

Preformed GFRP mesh for CRM reinforcement systems

Preformed structural mesh in alkali-resistant AR glass fiber with thermosetting primer, for reinforcement with seismic improvement of masonry structures. SISMANET is a mesh made of GRFP (Glass Fiber Reinforced Polymer) composite material, part of the SISMAWALL CRM system for the reinforcement of brick, stone, tuff or limestone wall structures using the CRM reinforced plaster technique.
The SISMAWALL CRM system includes SISMANET AR mesh, SISMABAR preformed fiberglass connector, SISMACAST anchor, SISMACOR corner piece installed with mortars based on natural hydraulic lime or cement.
The SISMAWALL CRM system has the CE marking following the E.T.A. n° 23/0400 of 05/25/2023 obtained in compliance with
E.A.D. 340392-00-0104 CRM (Composite Reinforced Mortar) Systems for Strengthening Concrete and Masonry Structures and compliant with the 'Guideline for the identification, qualification and acceptance control of preformed mesh systems in fiber-reinforced composite materials with a polymer matrix to be used for the structural consolidation of existing buildings with the CRM (Composite Reinforced Mortar) reinforced plaster technique'.



CE E.T.A. marking n° 23/0400

SUBSTRATE PREPARATION

Correct preparation of the support is necessary to guarantee the effectiveness of the reinforcement system. Demolition of the existing plaster until the surface of the wall facing is exposed, with removal of the loose or inconsistent parts, scarification of the bedding joints, sealing and re-coating of any cracks present with suitable **PREMIER** masonry mortars. Final low-pressure hydrowashing and saturation wetting of the wall surface, ensuring that the wall does not have excess water (saturated condition with dry surface).

LAYING THE FIRST LAYER OF PLASTER

On a saturated support with a dry surface, spread a first layer of rizaffo by hand or by mechanized projection of the natural hydraulic lime-based or cement-based structural plaster of suitable mechanical characteristics according to the project's technical specifications. In this first phase it is necessary to ensure the creation of an average thickness of 15 mm.

MESH POSITIONING, ANGULAR CONNECTORS

Fresh on fresh, proceed with the temporary installation of the AR **SISMANET** fiberglass mesh, partially incorporating it into the render layer and fixing it, if necessary, with the aid of carpentry nails. To cut the net to size, use shears, construction nippers or an angle grinder, ensuring an overlap of 20 cm in the end parts of the net in order to guarantee mechanical continuity. Position the **SISMACOR** corner pieces in correspondence with the corners, overlapping them on the net by at least 20 cm.
Once the render has set and in any case no later than 24 hours, proceed with the execution of holes in a number of no less than 4/m² and in any case following the design specifications, passing through intervention on both faces (ø 22 mm with Ø 8mm bars), or for a depth of 2/3 of the masonry for application on a single face (ø 14 mm with Ø 8mm bars), to be carried out preferably with rotary tools.
Cleaning of the hole and insertion of pre-formed **SISMABAR** "L" shaped fiberglass connectors of variable length depending on the thickness of the masonry. Ensure an overlap of 20 cm between the connection elements. Positioning of the **SISMANET RT** distribution gusset and grouting the connector with the **SISMACAST** chemical anchor.

FINAL PLASTERING

Proceed with the creation of a second layer of structural plaster within 24-36 hours of applying the render. In mechanical application, adjust the flow meter until a plastic-thixotropic consistency is obtained. Spray the product at a distance of approximately 20-25 cm. up to a minimum overall thickness of 30 mm. For plaster thicknesses greater than 30 mm, the application must be carried out in several coats, applying successive layers on the previous non-trowelled layer.

IMPIEGO USE

Reinforcement and consolidation of load-bearing masonry structures* made of brick, stone, tuff and/or limestone.

*Masonry walls, pillars, attic, arches, vaults and domes

ADVANTAGES

- High performance
- Ductility compatible with ancient masonry structures
- Excellent durability and guarantees of performance over time
- Suitable primer to facilitate on-site operations

STORAGE and PACKAGING

Store dry and away from direct sunlight. Packs of 50 m²

All the info on **www.premierpremiscelati.it**

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SISMANET 110 CHARACTERISTIC DATA

Characteristics	Unit of measurement	Nominal Value	Reference standard
Colour		Dark yellow	
Weight of raw fabric	g/m²	493	-
Starched fabric weight	g/m²	605	EN 12127:1997
Coating	g/m²	112	ISO 1887:2014
Mesh size	mm x mm	33,02mm x 32,50mm	ETAG 0004
Number of bars per meter	N°	Weft: 24 Ordito: 26	-
Thickness	mm	2,21	ISO 4603:1993
Nominal section of the strands	mm²/bar	Weft: 8,75 Warp: 7,00	CRM Guideline
Bar tensile strength (characteristic value)	MPa	Weft: 411,40 Warp: 602,96	CRM Guideline
Bar tensile strength (average value)	KN	Weft: 3,99 Warp: 4,56	CRM Guideline
Bar tensile strength (characteristic value)	KN	Weft: 3,60 Warp: 4,22	CRM Guideline
Tensile strength of the network (average value)	KN/m	Weft: 95,76 Warp: 118,56	-
Tensile strength of the network (characteristic value)	KN/m	Weft: 86,40 Warp: 109,72	-
Characteristic elongation at breakage of the bar	%	Weft: 1,54 Warp: 1,66	CRM Guideline
Elastic modulus	GPa	Weft: 27,16 Warp: 35,61	CRM Guideline
Operating temperature	°C	-5° / 50°	ETA 23/0400
Roll height	cm	160	
Roll length	m	31,25	

Tolerances equal to +/- 5% where applicable

WARNINGS

Product intended for professional use. Check the integrity of the packaging before use and do not use a product that is not perfectly packaged. In particular, do not use a product that appears to have been crushed or subjected to traction. The customer is required to verify that the product is suitable for the intended use and to ensure that this technical document is valid and not superseded by subsequent updates. During handling and application wear protective clothing, glasses and gloves. The updated technical documents can be found on the website **www.premierpremiscelati.it**.