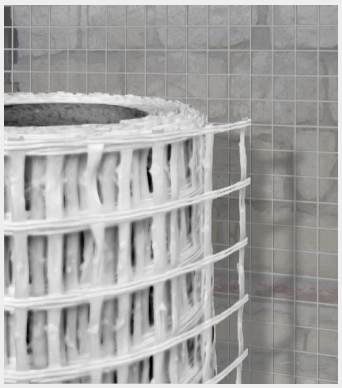

Kimitech WALLMESH HR

ST7-0622

Structural H.R. pre-primed, thermosetting glass fibre mesh

DESCRIPTION

Kimitech WALLMESH HR is a preformed structural mesh made of composite material consisting of pre-primed, thermosetting, alkaline-resistant, glass fibers used in combination with mortars from **Basic**, **Betonfix** and **Tectoria** ranges for CRM reinforcements

USES

Structural reinforcement of masonry structures.

WORKS

- CRM reinforcing system consisting of A.R. fiberglass mesh and NHL-based mortar (**SA93**).
- CRM reinforcing system consisting of A.R. fiberglass mesh and NHL-based mortar, in case of rising damp issues (**SA123**)
- Structural reinforcement with CRM systems on reinforced concrete walls with high resistance fiberglass mesh (**SA153**)..

APPLICATION

To guarantee the proper cooperation of the reinforced casting with **Kimitech WALLMESH HR** mesh, in case of CRM systems it is necessary to provide an adequate connection systems.
We recommend the use of preformed "L" connectors in glass fiber and thermosetting resin Kimitech PLUG VR in the number foreseen by the project, in any case not less than 4 per m^2.

The reinforcement system consisting of Kimitech WALLMESH HR structural meshes and the aforementioned connectors complies with the "Guidelines for the identification, qualification and acceptance control of preformed mesh systems in fiber-reinforced composite materials with polymer matrix to be used for structural consolidation of existing buildings with CRM (Composite Reinforced Mortar) plaster technique.”.

In order to prevent the mesh from being pushed into direct contact with the substrate during application, as it is not incorporated into the casting and because it cannot counteract movements and shrinkage in the short and long term, it is essential to follow this procedure:

- demolition of existing plaster and detached parts including scarification of bed joints;
- washing and wetting of the surface until SSD conditions;
- possible reconstruction of missing or particularly damaged masonry parts;
- application of a first rough coat (1,5-2 cm) on the masonry wall;
- installation of the mesh, partially incorporating it in the fresh render mortar, overlapping of the mesh strips for about 15 - 20 cm in order to guarantee mechanical continuity;
- drilling (diameter 20 mm, of the necessary depth or passing through), cleaning, insertion of the connectors and injection of chemical anchoring;
- application of plaster respecting project needs (1,5-2 cm).

In the case of plasters reinforced with **Kimitech WALLMESH HR** mesh, the skim coating should be carried out upon completion of the plaster curing (wait at least 1 week for each centimeter of thickness, and at least 3 weeks in total), so as to seal any shrinkage cracks that may appear especially for plasters in high thicknesses (in these cases it is always advisable to reinforce pre-painting skim coating with **Kimitech 350** mesh).

PACKAGING

Rolls: Width 100 cm, length 25 m.

Characteristics	Kimitech WALLMESH HR
Zirconium content Zr (%)	>16
Non-primed fabric weight UNI 9311/4	449 g/m²

Pre-Primed fabric weigth UNI 9311/4	573 g/m²
Glass density	2,68 g/cm³
Elongation at failure UNI 9311/5	1,5 %
Single wire failure load	Warp: 3,65 KN Weft: 3,4 KN
Number of wires per metre	Warp: 26 Weft: 28
Unit resistance per unit of mesh width UNI 9311/5	Warp: 95 kN/m Weft: 95 kN/m
Equivalent thickness	Warp: 0,076 m Weft: 0,076 m
Resistant section	Warp: 76,27 mm²/m Weft: 76,27 mm²/m
Avarage thicknesss of pre-primed fabric UNI 9311/3	2,20 mm
Mesh size (internal measures)	35 x 30 mm

WARNING

Product intended for professional use.
The product is an item according to the definitions of Regulation (EC) n. 1907/2006 and therefore does not require a Safety Data Sheet.
The marking obligations are not related to the intrinsic nature of a given product, but to the use for which a specific material is used: before placing the orders, it will be the customer's responsibility to submit all the available documentation to the works supervision in order to explain the suitability of the materials (in terms of certifications and performance) in relation to the use to which they are intended.
The information and requirements indicated in this Technical Data Sheet are based on our current knowledge and experience and are to be considered, in any case, purely indicative. They cannot guarantee the final result of the applied product and they have to be confirmed by exhaustive practical applications; therefore the user must test the suitability of the product for the intended application and its purpose. Users must always refer to the latest version of the local technical data sheet related to the product.

TECHNICAL SPECIFICATIONS

SK93 - Structural reinforcement with CRM systems consisting of H.R. fiberglass mesh and mortar made of natural hydraulic lime
SK123 - Structural reinforcement with CRM systems consisting of H.R. fiberglass mesh and NHL-based mortar on masonry walls affected by rising damp.

(**SK93**) Demolition of existing plaster and loose parts and scarification of bed joints. Washing and wetting of the surface until SSD conditions are achieved.
Possible reconstruction of missing or particularly damaged masonry parts.

On a saturated substrate with a dry surface, apply a first coat of render to the masonry with a M15 natural hydraulic lime based mortar from Basic or Tectoria ranges by Kimia S.p.A. or similar products.

Installation of glass-fibers mesh Kimitech WALLMESH HR by Kimia S.p.A or a simila product, (to cut the mesh at the openings use shears and/or construction cutters or angle grinder), partially incorporating it into the fresh mortar of the rough coat, overlapping the mesh strips for about 15 - 20 cm in order to guarantee mechanical continuity.

Drilling (diameter 20 mm), pass-throughs (where required the reinforcement on both sides) or for a depth of 2/3 of the wall (in the case of reinforcement of both facades) in the number envisaged by the project (however not less than 3 per square meter), to be carried out in compact areas of the masonry, preferably with rotating tools.
Cleaning, insertion pre-formed, thermosetting, “L” shaped Kimitech PLUG VR connectors by Kimia S.p.A. or a similar product with improved adherence and injection of chemical anchor Kimitech EPOXY CTR by Kimia S.p.A. or a similar product. Wait the first coat is hard enough, then apply the second coat by hand or by machine. In case of thickness bigger than 30 mm, the application must be done in several layers, applying each differnet coat on the non-smothed previous one. The final skimmimng caot must be applied only after the proper curing time of the applied plaster.

(**SK123**) Demolition of existing plaster and loose parts and scarification of bed joints. Washing and wetting of the surface until SSD conditions are achieved. Possible reconstruction of missing or particularly damaged masonry parts.
On a wet substrate with a dry surface, apply a first coat, at least 2 cm of thickness, of render to the masonry using Tectoria M15 by Kimia S.p.A or a similar product.
Installation of glass-fibers mesh Kimitech WALLMESH HR by Kimia S.p.A. or a similar product, (to cut the mesh at the openings use shears and/or construction cutters or angle grinder), partially incorporating it into the fresh mortar of the rough coat, providing an overlap of the mesh strips for about 15 - 20 cm in order to guarantee mechanical continuity.
Drilling (diameter 20 mm), pass-through (where required on both sides) or for a depth of 2/3 of the wall (in the case of reinforcement on only one face) in the number envisaged by the project (in number however not less than 3 per square meter), to be carried out in compact areas of the masonry, preferably with rotating tools.
After cleaning, insertion of preformed, “L” shaped, glass-fibre connectors Kimitech PLUG VR with thermosetting resin and improved adherence by Kimia S.p.A. or a similar product, sealed by means of epoxy resin Kimitech EPOXY CTR by Kimia S.p.A. or a similar product. Once the first coat of mortar set, apply the next coat by trowel or machine device. In case of thickness bigger than 30 mm, the application must be splitted in several layers, applying each next layer on the previous non-smoothed surface.

The skimming coat will be applied after the necessary curing time of the plastering mortar.

- Zirconium content, Zr> 16%;
- Typical elongation at failure (warp): 1,5%;
- Typical elongation at failure(weft): 1,5%;
- Weight of the fabric UNI 9311/4: 573 g / m²
- Tensile failure load of the single wire (warp): 3,65 KN;
- Tensile failure load of the single wire (weft): 3,4 KN;

- Resistance per length unit UNI 9311/5 (warp): 95 N / mm;
- Resistance per length unit UNI 9311/5 (weft): 95 N / mm.
- Equivalent thickness (warp): 0,076 mm
- Equivalent thickness (weft): 0,076 mm
- Mesh size: 35 x 30 mm