



## Preformed GFRP composite mesh for concrete reinforcement

**Preformed GFRP mesh with very high resistance and durability composed of bars made with continuous ECR glass fibers impregnated with thermosetting epoxy resin.**

**ARMORCRETE NET is available with different mesh light solutions and with different bar diameters. Its construction geometry involves the coupling of pultruded warp and weft bars fixed in the nodes with sewing thread to obtain non-deformable square meshes with high net light without areas of weakening of the node.**

**The ARMORCRETE system is used as a replacement for the usual metal armor for the cortical reconstruction of reinforced concrete elements, consolidation of load-bearing or infill masonry panels, reinforcement of floors, reinforcement of vaults by virtue of its mechanical properties, lightness and its chemical-physical properties.**

**It can be used both with the CRM technique for reinforced plaster interventions, with sprayed mortar, and for casting in formwork.**

**The ARMORCRETE system has an ETA (European Technical Assessment).**

### SUBSTRATE PREPARATION

Demolition of the existing damaged matrix part until the surface of the support on which the reinforcement matrix will be applied is exposed. In the case of masonry facing, plaster and loose or inconsistent parts will be removed, the bedding joints will be scarified, sealing and patching of any existing lesions; in the case of concrete elements, all inconsistent parts or parts characterized by carbonation degradation will be removed until a solid and coherent support is achieved that guarantees the necessary resistance to tearing.

In any case, cleaning of the surface is planned, possible application of Premier Consolidante P1 cortical consolidating fixative; reconstruction of missing or particularly damaged wall portions, in order to restore the structural continuity of the element.

Before applying the matrix, washing and wetting of the surface until saturation is planned.

### POSITIONING OF THE NETWORK AND CONNECTORS

ARMORCRETE NET 99X99\_3 allows you to operate by previously fixing the mesh to the support with specific GFRP Premier SISMABAR 08 connectors.

Whether you proceed with the CRM technique or with the formwork casting, ARMORCRETE NET 99X99\_3 is positioned in the correct position foreseen by the project stratigraphy, fixing it on the L-shaped connectors previously inserted and made integral with the support with the Premier SISMACAST EP or SISMACAST VE resin based on the required mechanics.

The mesh must be laid as flat as possible, avoiding folds and bulges. Between one element of the mesh and another, provide an overlap of at least 20 cm. Once the mesh has been fixed, it is possible to proceed with the mechanical application of the reinforcement product foreseen for the specific application or proceed with the formwork and subsequent filling with shrinkage-compensated pourable mortars.

The mesh size of ARMORCRETE NET allows for the direct machine application of concrete repair grouts or certified mortars with high mechanical performance provided in the Premier range.

In any case, the reinforcement layer must continuously cover ARMORCRETE NET which must be perfectly incorporated into the product itself.



### USE

- Medium/high thickness widespread reinforcement interventions of concrete or masonry structures;
- Static and seismic adaptation and improvement of vertical and horizontal structural elements;
- Cortical reconstruction of concrete walls in canals, tunnels, retaining walls, etc.
- Anti-overturning and anti-collapsing interventions of lightweight brick elements.

### ADVANTAGES

- Quick and easy application;
- Lightness and resistance in reduced thicknesses;
- Excellent mechanical characteristics;
- Easy to cut;
- Use in aggressive environments including saline;
- Durability;
- Compatible with all substrates: concrete, stone, brick and tuff;

### STORAGE

Keep in a dry place for 12 months and away from direct sunlight.

All the info on [www.premierpremiscelati.it](http://www.premierpremiscelati.it)

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RESTORATION AND REINFORCEMENT OF CONCRETE | ARMORCRETE

**Dimensions**

Diameter of longitudinal and transversal bars	3 mm
Mesh	99x99 mm
Starched fabric weight	310±5 g/m <sup>2</sup>
Roll width	2,00 m
Roll length	50 m
Bars per meter	10

**Mechanical characteristics**

	WARP	WEFT
Nominal weft bar section	7,07 mm <sup>2</sup>	7,07 mm <sup>2</sup>
Breaking load per linear metre, average	63,13 kN/m	64,47 kN/m
Breaking load per linear metre, characteristic	51,33 kN/m	55,27 kN/m
Breaking load for single bar, average	6,31 kN	6,48 kN
Breaking load for single bar, characteristic	5,13 kN	5,53 kN
Tensile strength, average	893 MPa	912 MPa
Tensile strength, characteristic	726 MPa	782 MPa
Average elastic modulus	41,22 GPa	39,96 GPa
Average elongation	2,39%	2,29%

**Chemical and physical characteristics**

Type of yarn	Continuous ECR glass fibre
Primer	Epoxy resin
Operating temperature	-20°/+90 °C
Thermal conductivity	0,35 W/m°C
Corrosion resistance	Non-corrosive
Electrical conductivity	Dielectric
Environmental compatibility	Non-toxic

**WARNINGS**

Product intended for professional use. Check the integrity of the packaging before use and do not use the product if it is not perfectly packaged. In particular, do not use the product that has 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](http://www.premierpremiscelati.it)

