

TecnoFib TETRA CARB

REINFORCEMENT SYSTEMS WITH CARBON FIBRE FABRICS

Description Fabric of carbon macro-fibres, quadro-axial with very high tensile strength.

Advantages and characteristics The mechanical performance of the reinforcement system Tecnofib TETRA CARB shows a typical linear elastic behaviour till break. The tolerated static load applied, shall be 1/3 of the tensile strength of the fibre.

Fields of use Main applications:

- Recovery of structures with seismic damages.
- Reinforcement of concrete and masonry structures.

Method of use The product is applied to the surface of the structural elements to be reinforced, by mean of epoxy adhesives (TECNOEPO 701/UNIC).
The installation of the fibre tissue with the adhesive can be made only after a thorough preparation of the substrate, using sand or grid-blasting, in order to remove all dust and incoherent parts. When the substrate is deteriorated or, in order to improve adhesion properties of the system, it is advisable to apply epoxy putty (TECNOEPO R) to level and repair the surface.
The installation of the fabric has to start by the application by roller of an epoxy primer, about 0,800 kg/m², over the entire surface that will require the reinforcement.
The manual application of the net must be accompanied by a special rolling with a spiked roller, to eliminate any air bubbles and allow the penetration of the resin in the cavities of the net. For any subsequent layers proceed by repeating the cycle described beginning with the first application of the epoxy adhesive TECNOEPO 701/UNIC primer and onwards. The curing depends on the reticulation time of the epoxy resin and it is linked to the climatic conditions like temperature and humidity. In particular, applications at temperature lower than +10°C, and at high relative humidity should be avoided. In case of application at temperatures below +10°C, and in order to have a pot life of the epoxy adhesive not too much delayed, it is advisable to heat slightly the environment.

Packaging Rolls of 50 linear meters, width 127 cm

Technical Characteristics (typical values)

- Principal mechanical characteristic: very high modulus
- Tensile strength: > 4800 MPa
- Elasticity modulus at tensile strenght: 240 GPa
- Elongation: > 1,5%
- Density: 1,77 g/cm³
- Weight: 380 g/m²- 600 g/m²
- Fabrick thickness at 0°C and 90°C: approx 0,052 mm
- Fabrick thickness at ± 45° : approx 0,058 mm

Safety indications Read carefully the safety indications on the packaging, or consult the relevant Material Safety Data Sheet of this product

The above information is based on our best experiences and lab results and on results of the application of the product in various fields. Tecnochem Italiana is not responsible for negative performances due to not proper use of the product or for defects due to elements not connected with the quality of the product included wrong storage. Technical characteristic in this technical data sheet are up-to-dated periodically. Revision date of this technical data sheet is indicated below. Changes of this data sheet can be found in our web-site www.tecnochem.it where you can find the same technical data sheet updated in real time.

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