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construction chemicals

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Teknowrap 600

600 gr/m² Bidirectional Carbon Fiber Farbic

Product Description

Carbon fibers are one of the most strongest materials known in the world. Although carbon fibers in fabric fineness is 14 times stronger than the STL steel against tensile, its weight is around one fifth of steel. The fibers, which are normally in yarn softness, are easily brought to the desired shape and become rigid when laminated with special epoxy resin (TEKNOBOND 300).

Areas of Usage

- Repair of medium and lightly damaged columns and beams,
- Corrosion damaged, bridges, viaducts, columns and beams strengthened.
- It is used in the repair of historical monuments, mosque dome and minarets.
- Used in function changes.
- Places where there is a problem in concrete quality are used after the static project is done.

Features and Benefits

- When it's wrapped around the stirrup tightening areas of the column, it acts an additional stirrup.
- Increase the cutting capacity of the column.
- Increases vertical transport capacity when wrapped around circular columns.
- It prevents the wall from being scattered in any kind of wall, in the face of impact and explosion.
- When the column is completely wrapped, the stretchability of the column increases in great extent, so there is no breakage in the columns even at larger oscillations.
- The most obvious advantage of the carbon fiber repair method is that it can achieve a multiple of the robustness achieved with conventional methods, even though it adds only a few millimeters of thickness.
- Stronger than steel but much more lightweight, no corrosion problem. It can easily take shape.

Application Instructions

Surface Quality: The surface of the application should be free from all kinds of dust, dirt, weak and volatile particles, cement grout residues, oil and dirt and be dry. Concrete bottom surface should be clean, strong and have sufficient compressive strength (at least 25 N/mm²), its pull-off strength should be at least 1.5 N/mm². Concrete should be strong and have sufficient strength.
Surface Preparation: The application surface should be cleaned using methods such as applying compressed air to maintain maximum adhesion strength. Weak concrete parts should be repaired and restored with high strength repair mortar. The plaster on the construction element must be removed, the surface must be cleaned, and necessary repairs should be made.
TEKNOWRAP 600 is cut and prepared according to the application. Wet bonding process is applied with prepared TEKNOBOND 300. Teknobond 300 is packed into a clean container like a clean basin. TEKNOWRAP 600 is immersed in it. It is necessary to ensure that the epoxy is homogeneously impregnated into the carbon fibers. Epoxy-impregnated TEKNOWRAP 600 is bonded to the concrete surface using TEKNOBOND 200.
Carbon fibers do not burn but epoxy can ignite after a certain temperature. Because of this reason, very thin epoxy is applied on the carbon plate, then the sand is spread in dry condition and plaster is applied on it. Spreading sand provides adherence between carbon fiber and plaster.

Application Notes / Restrictions

- TEKNOWRAP 600 systems must be implemented by specialist appliances.
- During the application gloves, glasses etc. safety equipment such as TEKNOWRAP 600
- it should not be held naked.
- Before the application, the design of the reinforcement project must be done by a civil engineer. Projected and responsible.
- The final check of the application should be performed by the universities / independent testing organizations / inspectors.

Technical Data

General Information	
Color	Black
Structure of Material	Carbon
Unit Weight	600 g/m^2
Shelf Life	Unlimited in Dry Storage Conditions
Nominal Wall Thickness	0.34 mm
Package	100 cm x 100 m roll. colitis
Performance Information	
Tensile Strength	4,900 MPa
Modulus of Elasticity	230,000 MPa
Elongation at Break	2.1%