

BET10® CARBON WRAP

Unidirectional Fibrous Polymer Fabric
Product Technical Data Sheet



GENERAL FEATURES

DESCRIPTION

Bet10® Carbon Wrap is a unidirectional carbon fiber fabric designed for structural reinforcement applications as part of a strengthening system. It provides moderate strength and can be applied using dry or wet methods. This versatile fabric can meet a wide range of reinforcement needs and can be applied to different surfaces and geometries such as beams, columns, chimneys, piles, walls, voids, silos, and more. Additionally, it has low density which helps to minimize additional loads, making it an excellent choice for structural reinforcement projects.

FIELDS OF APPLICATION

- For increasing resistance against seismic motion
- For increasing the strength and ductility of columns
- For increasing the load-carrying capacity of structural elements
- For reinforcement of deficient reinforcement
- For improving the seismic performance of masonry walls
- For rectifying design or manufacturing defects
- For changing the use of the building, different uses, and renovation
- For compliance with existing standards
- For enhancing service life and durability through structural strengthening.

ADVANTAGES

- Can be applied to different surface areas and geometries such as beams, columns, chimneys, piles, walls, voids, silos, etc.
- An economical solution compared to traditional methods.
- Due to its low density, it minimizes additional loads.
- A versatile use that can meet a wide range of reinforcement needs.

APPLICATION

PREPARATION OF THE SURFACE

Before starting the application, fibrous polymer fabrics of planned dimensions should be cut and cleaned from foreign materials such as oil, grease, dirt, etc. on their surfaces using solvents such as thinner.

APPLICATION

Bet10® Carbon Wrap should be placed on the surface with fibrous polymer fabric adhesive and stretched in the direction of the fibers using a roller to ensure absorption into the adhesive. Then, a second layer should be applied to laminate the fibrous polymer fabric between the two layers of adhesive. The same process should be repeated between each layer in multi-layer fibrous polymer applications. In areas exposed to sunlight, the material should be covered with a UV-resistant coating within 7 days of application. In cases requiring fire resistance, the surface should be coated with suitable thickness of fire-resistant mortar. Finally, on surfaces where plastering will be applied after fibrous polymer application, BET10® Carbon Wrap Adhesive should be spread with gear sand while still wet to create roughness on the surface. This will facilitate adhesion of the plaster.

THINGS TO CONSIDER

- Bet10® FRP systems should only be applied by expert applicators.
- During the application, protective equipment such as gloves and goggles should be used as safety gear. Additionally, Bet10® Carbon Wrap should not be handled with bare hands.
- In special cases (different weather conditions, different application areas, etc.), if any application is to be made that is not specified in the information sheet, Bet10® Construction Chemicals Technical Service should be consulted.

TECHNICAL DATA

Features	BET10® Carbon Wrap 200-50 12K	BET10® Carbon Wrap 300-50 12K	BET10® Carbon Wrap 300-50 24K
Material Type	Carbon	Carbon	Carbon
Weaving	Unidirectional	Unidirectional	Unidirectional
Elasticity Moduls (N/mm²)	240 Gpa	250 Gpa	240 Gpa
Tensile Strength (N/mm²)	4900 Mpa	5500 Mpa	4200 Mpa
Fiber Weight (g/m²)	200	300	300
Width (mm)	500	500	500
Fiber Density (g/cm³)	1.8	1.8	1.78
Warp	Carbon Fiber 12K – 800 Tex %98	Carbon Fiber 12K – 800 Tex %99	Carbon Fiber 24K – 1600 Tex %99
Weft	E Glass Hot Melt %2	E Glass Hot Melt %1	E Glass Hot Melt %1

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THINGS TO CONSIDER

CLEANING OF TOOLS

After the application, the tools and equipment used should be cleaned with solvent. Bet10® Carbon Wrap can only be mechanically removed from the surface after it has hardened.

PACKAGING

Bet10® Carbon Wrap 230-50 CFS 50 m2 (0,50 x 100 m) rolls
Bet10® Carbon Wrap 300-50 CFS 50 m2 (0,50 x 100 m) rolls

STORAGE

Store the products in a closed, ventilated, dry place away from moisture, fire, flames, and direct sunlight (+5°C- +30°C).

SAFETY PRECAUTIONS

Preventive measures taken for conventional chemical products should be considered when using this product. After the work is completed or interrupted, hands should be washed thoroughly with plenty of water, and food, drink, and smoking should be avoided. Special safety information regarding the use and transportation of this product is available in the Material Safety Data Sheet. Relevant Health and Safety Information Documents should be consulted for complete information on health and safety issues. This product and its packaging should be disposed of in accordance with local laws and regulations. This responsibility belongs to the end user of the product.

DISCLAIMER

The information provided in this technical document is based on our scientific and practical knowledge. Bet10® Koruma Sistemleri Danışmanlık ve İnşaat San. ve Tic. Ltd. Şti. is solely responsible for the quality of the product. Bet10® Koruma Sistemleri Danışmanlık ve İnşaat San. ve Tic. Ltd. Şti. cannot be held responsible for any results arising from the use of the product in a manner other than that recommended in the written suggestions or from incorrect use. This technical document is valid until a new edition is printed and nullifies the previous editions.

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