

BET10® CARBON FIBER MESH

Unidirectional Fibrous Mesh
Product Technical Data Sheet



GENERAL FEATURES

DESCRIPTION

Bet10® Carbon Fiber Mesh is woven using a special weaving process and has undergone multiple coating technology treatments. The carbon fiber grid reinforcement system refers to a process in which carbon fiber grids are first laid, and then high-quality spray mortar containing active ingredients is used for construction. Through the special coating treatment of the carbon fiber mesh, it is ensured that there is sufficient binding force and anchoring force between the carbon fiber mesh and the mortar.

FIELDS OF APPLICATION

Carbon fiber mesh may be used to strengthen or retrofit a wide range of concrete, steel and masonry structural elements including columns, beams, slabs, walls, pier caps, piles, etc.

- Strengthen for increasing load capacity.
- Address changes in structural system, like slab openings and walls, beams or columns removal.
- Retrofit for seismic, wind or blast.
- Restore strength of structural elements damaged by fire or vehicle impact.
- Restore strength to deteriorated and corroded members.
- Strengthen for design or construction defects.

ADVANTAGES

- Extra high temprature resistance under non-oxidizing environment.
- Good fatigue resistance, abrasion resistance and corrosion resistance.
- Good electromagnetic shielding and X-ray permeability.
- Insoluble and non-swelling in the organic solvent, acid, alkali.

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 Fiber Mesh 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 Fiber Mesh 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 Fiber Mesh 160 - 100 12K
Material Type	Carbon
Weaving	Unidirectional
Elasticity Moduls (N/mm²)	240 Gpa
Tensile Strength (N/mm²)	1800 - 1900 Mpa
Fiber Weight (g/m²)	160
Width (mm)	100
Fiber Density (g/cm³)	1.8

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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 Fiber Mesh can only be mechanically removed from the surface after it has hardened.

PACKAGING

Bet10® Carbon Fiber Mesh 160 - 100 CFS 100m2 (1 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.

CONTACT

CONTACT INFO

Bet10® Koruma Sistemleri Danışmanlık ve İnşaat San. ve Tic. Ltd. Şti.

Address: Naldöken Mahallesi Ankara Caddesi No: 353
İç Kapı No: 1 Bornova/ İZMİR

Tel:+90 232 502 28 55

Tel:+90 232 478 20 27

Application Mail: teknik@bet10.com.tr

Sales Mail: satis@bet10.com.tr

Web: www.bet10.com.tr

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