

# eile CARBOSHIELD

## Carbon Fiber Fabric

### Description

It's a latticed, uniaxial and biaxial carbon fiber fabric for structural strengthening.

### Areas of Usage

- \* Shear and bending loads of structural members,
- \* Strengthening of reinforced concrete beams against bending and shearing,
- \* Strengthening of reinforced concrete floorings against bending and shearing,
- \* Strengthening of reinforced concrete column against pressure,
- \* Deficient reinforcement,
- \* Structural strengthening,
- \* Seismic strengthening of masonry walls,
- \* Strengthening of domes, vault and minaret of historical buildings.

### Features of Product

- \* It is easy to transport within site due to its low unit weight.
- \* When its wefts are strengthened via heat treatment, it can be cut in both directions.
- \* It does not impose additional burden on strengthened structure due to its low density.
- \* It can be used on different surface geometry such as silo, chimney, pile, wall, beam and column due to its uniaxial structure.
- \* It increases crushing strength of all kinds of walls against explosion and impact.

### Application Procedure

#### Surface Preparation

Before application, materials such as dust, oil and paint which prevents adherence should be removed. The cracks-gaps or corroded parts on the surface should be repaired and cleaned. The corners should be rounded at least as 10 mm diameter. The cement based corrosion preventive **eile SNS 804** and repair mortar **eile TH 70** should be used for repairs. The tensile strength of application surface should be 1 N/mm<sup>2</sup> at least. The moisture rate on the surface should not exceed 5% during application.

**Safety Recommendations:** Please wear the coveralls, protective gloves, glasses and mask suitable for occupational health and safety. Make sure that it does not contact the skin and the eyes; in case it does, wash with plenty of water. In case swallowed, contact the closest health care institution immediately. Keep out of the reach of children. Keep food and drinks away from the application areas.

**Responsibility:** In case the recommendations and application conditions specified above are not conformed, the applications (misuse) do not fall under the responsibility of **POMZA EXPORT A.Ş.**, the producer of **eile POMEX** branded products. The user is responsible for whether the product is used in accordance with its purpose, as well as the validity of application conditions and forms. **eile Pomex Construction Chemicals** does not accept any indemnity claim concerning the results, work accidents, direct or indirect damages or losses due to the misapplication of the products.

**Note:** **eile POMEX** reserves the right to improve/revise the product and this technical document over time. This Technical Data Sheet supersedes the former Technical Data Sheet released for this product. The user must make sure that the available technical document is the latest updated version. If necessary, our company must be contacted to inquire the updating status of the document. AUGUST 2014

### Application

Carboshield should be cut with an appropriate scissors or utility knife. After **eile EPX 33** is applied on the surface with a roller, Carbonshield is applied by stretching in the direction of the fibers. In order **eile EPX 33** epoxy adhesive not to go out from fibers and not to have an air gap, a pressure should be done with a roller on fibers. Then, **eile EPX 33** adhesive should be applied again and the material should be laminated between two-coat epoxy.

### Technical Specifications

Specification	CARBOSHIED 200	CARBOSHIED 300	CARBOSHIED 600
Structure of the Material	Carbon Fiber	Carbon Fiber	Carbon Fiber
Colour	Black	Black	Black
Unit weight	200 gr/m <sup>2</sup>	300 gr/m <sup>2</sup>	600 gr/m <sup>2</sup>
Carbon fibre Thickness	12 K	12 K	12 K
Width	50 cm	50 cm	100 cm
Section Thickness	0,16 mm	0,18 mm	0,52 mm
Elongation at Break	1,80%	1,80%	1,80%
Elasticity Module	240.000 N/mm <sup>2</sup>	240.000 N/mm <sup>2</sup>	240.000 N/mm <sup>2</sup>
Tensile Strength	4.900 N/mm <sup>2</sup>	4.900 N/mm <sup>2</sup>	4.200 N/mm <sup>2</sup>
Direction	Uniaxial	Uniaxial	Biaxial

### Storage

It should be stored in unopened original package in a cool and dry place and over +5°C and under +35°C away from direct sunlight.

### Shelf Life

Shelf life is 24 months from production date in unopened package and appropriate storage conditions.