

# eile CARBOFRP

## Carbon Fiber Plates for Structural Reinforcement

### Description

It's a high strength, light, used for structural reinforcement, carbon fiber plate.

### Features

- \*It has high strength,
- \*It is light, it's manufactured limitless sizes, no addition,
- \*It has high alkaline strength,
- \*Junction points of the plates can be passed easily,
- \*Its mounting is easy, it may be applied as layers,
- \*High strength and elasticity module combinations are available.

### Areas of Usage

- \*To increase load carrying capacity of floors and beams,
- \*Mounting of heavy machines and in load increases such as building usage purpose,
- \*To reduce stress on steel reinforcement in case of damage to construction elements,
- \*To improve conditions for example; to reduce crack widths,
- \*It's used for design and building defects such as structural system changes, specification changes and insufficient reinforcement amount.

### Range of Products

Product name	Width ( mm )	Thickness ( mm )
C-01	100	1,4
C-02	100	1,2

C-03	50	1,4
C-04	50	1,2

### Application

#### Surface Preparation

Concrete and masonry: The surfaces should be durable, dry and clean and grease, ice, oils, old surface coatings, curing materials and all loose parts should be removed. The concrete should be cleaned from surface dirtiness which are not cement grout and open cellular.

#### Consumption

Plate width	eile EPX 33
50 mm	0,35 kg/m <sup>2</sup>
100 mm	0,80 kg/m <sup>2</sup>

**Wooden surfaces:** The surface should be smoothed with methods of emery or sanding. The dust on the surface should be cleaned with vacuum method.

**Steel surfaces:** The surface should be cleaned from oil, rust and other materials which may reduce adherence with sanding sa 2,5 level.

The material should be applied on the surfaces of carbon fiber plates previously prepared with a thickness of 1-1,5 mm with a scraper. Then carbon fiber polymer plates which are applied adhesive should be fixed on the surface by stretching in the direction of fibers. After this procedure, it should be pressed on carbon plates in the direction of fibers and there should be no gap between concrete surface and it. The second coat should be applied within 1 hour, or wait 12 hours.

### Application

The amounts to be applied according to the plate width may vary depending on the smoothness of the surface and plate junction points.

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## Technical Specifications

**Appearance** : Carbon fiber reinforced polymer within epoxy matrix.

**Colour** : Black

**Tensile strength** : 3100 Mpa

**Tensile module** : 165 Gpa

**Elongation at break min.:** % 1,5

**Unit weight** : 1,5 gr/cm<sup>3</sup>

**Thermal resistance** : > 150 °C

**Volumetric fiber content** : > % 68

## Package

As plates cut in desired length.

## Storage

It should be stored in dry places and without exposing to sunlight.

## Shelf Life

3 Years

**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.

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