

**PC<sup>®</sup> CARBOCOMP*****Unidirectional carbon fibre laminates for the reinforcement of structures*****1. Description**

Epoxy carbon fibre laminate composed of unidirectional carbon fibres.

- Minimum fibre content: 65 volume %
- Width: 60, 100, 120, 150 mm  
(other widths on request)
- Effective thickness: 1,0 mm  
(other thicknesses on request)
- Total thickness (bonding structure included): 1,2 mm  
(other thicknesses on request)

**2. Application**

Reinforcing of beams, floors, walls and columns in concrete, wood and steel. Strengthening of bridges and buildings, for example in the following cases:

- Repair of the original bearing capacity, like after a fire or corrosion of the rebars.
- Local strengthening of construction elements, when making holes through floor plates or walls.
- To increase the load bearing capacity.
- To repair errors during construction.

**3. Properties**

- Tensile strength: >2850 MPa
- Modulus of elasticity: >175 GPa
- Maximum elongation: 1,65%
- Density: 1,6 g/cm<sup>3</sup>
- Water absorption: < 0,1  
percent by weight
- Application temperature:  
-40°C to + 130°C



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#### 4. Processing

- Remove the peel ply.
- Concrete, steel, wood: the surface must be cleaned, prepared and smoothened.
- Concrete: the surface has to be free of grease, cement and dust.
- Repair unevenness and weak zones (the adhesion strength should, if possible, be superior to 1,5 N/mm<sup>2</sup>). Smoothen the surface, remove all dust and make dry.
- Metal: degrease and remove all rust, high pressure cleaning is preferred.
- Apply the epoxy glue PC<sup>®</sup> 5800/BL on the surface of the laminate that has to be glued:
- Mix the components of PC<sup>®</sup> 5800/BL, apply on the laminate with a spatula and make sure that no air is being enclosed.
- Consumption:  $\pm 3 \text{ à } 5 \text{ kg/m}^2$  depending on the roughness of the surface.
- Pot life: ca 30 min at 20°C
- After positioning the laminate on the surface, it must be pressed until a minimal quantity of glue comes out from underneath the laminate.
- Remove the glue that is pressed out with PC<sup>®</sup> 5900.

#### 5. Advantages

- High tensile strength and stiffness
- Light weight
- Very low creep
- Flexible in use
- Great lengths can be jointless installed
- Excellent corrosion, acid and alkali resistance
- High durability
- Little thermal expansion
- Requires little or no maintenance
- The finishing with paint or plaster demands no special requirements.
- The laminate is protected by a peel ply that must be removed before application. Thanks to this no roughening, cleaning and degreasing is necessary.