

PC[®] CARBOCOMP CMU – 1,4 THICKNESS

High modulus unidirectional carbon fibre laminates for the reinforcement of structures

1. Description

Epoxy carbon fibre laminate composed of high modulus unidirectional carbon fibres.

Minimum fibre content:	68 volume %
Width:	50, 60, 80, 100, 120 mm
Thickness:	1,4 mm

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 average value min. value	2200MPa >2050MPa
Modulus of elasticity average. value min. value	210GPa >200GPa
Elongation min. value	>0,98%

4. 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.

5. Processing

- Remove the peel ply.
- Concrete, steel, wood: the surface must be cleaned, prepared and smoothed.
- 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/mm²). 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[®] 5800/BL on the surface of the laminate that has to be glued:
- Mix the components of PC[®] 5800/BL, apply on the laminate with a spatula and make sure that no air is being enclosed.
- Consumption: ± 3 à 5 kg/m² 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[®] 5900.

6. Dimensions and shelf life

Longitude: 100 m

Shelf life: unlimited

7. Precautions and safety requirements

- **PC[®] Carbocomp:**
The laminate can have sharp edges, so wear protective gloves.
Keep it away from electricity.
- Epoxy glue: see technical data sheet PC[®] 5800/BL
- Cleaner: see technical data sheet PC[®] 5900