

PC® CARBOCOMP SU

Unidirectional carbon fibre laminates for the reinforcement of structures

1. Description

Epoxy carbon fibre laminate composed of unidirectional orientated carbon fibres.

Fibre content:	65 volume %
Available widths:	50, 60, 80, 100, 120 mm
Effective thickness:	1,2 mm

2. Application

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

- Repair of the original bearing capacity, for example after fire or corrosion of the rebars.
- Local strengthening of construction elements, when making openings in floor plates or walls.
- To increase the load bearing capacity.
- To repair construction errors.

3. Properties (EN ISO 527 – 1+5)

Tensile strength average value min. value	2400MPa >2200MPa
Modulus of elasticity average. value min. value	165GPa >160GPa
Elongation min. value	>1,33%
Density	1,4 g/cm ³

4. Advantages

- High tensile strength and stiffness
- Low self-weight
- Very low creep
- Flexible in use
- Large lengths can be installed jointless
- Excellent corrosion, acid and alkali resistance
- High durability
- Small thermal expansion

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- Requires little to no maintenance
- The finish with paint or plaster demands no special requirements
- The laminate is protected by a peel ply that has to be removed prior to application. Thanks to this no roughening, cleaning or degreasing is necessary.

5. Processing

- 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/mm²). Smoothen the surface, remove all dust and dry (<3%).
 - Metal: degrease and remove all rust, high pressure cleaning is preferred.
- Remove the peel ply in the longitudinal direction towards the end of the laminate and at an <45° angle.
- 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 entrapped.
 - Consumption: ± 3 to 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 excess glue with PC[®] 5900.

6. Dimensions and shelf life

Length: 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