

Products and techniques for construction and chemical industry

PC[®] CARBOCOMP

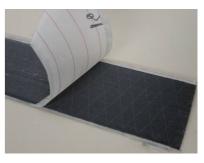
Unidirectional carbon fibre laminates for the reinforcement of structures

1. Description

Epoxy carbon fibre laminate composed of unidirectional carbon fibres.

Minimum fibre content: Width:

65 volume % 50, 60, 80, 100, 120 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

Effective thickness	1,2mm	1,0mm
Tensile strength	>2375 MPa	>2850 MPa
Modulus of elasticity	>165 GPa	>198 GPa
Maximum elongation	1,44%	1,44%
Density	1,6 g/cm ³	1,6 g/cm ³
Water absorption	<0,1 % by weight	<0,1 % by weight
Application	-40° C to +130° C	-40° C to +130° C
temperature		

4. Advantages

- High tensile strength and stiffness
- Light weight
- Very low creep
- Flexible in use
- Great lengths can be jointless installed

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This information is given to our best knowledge. It is offered as a possible helpful suggestion in experimentation you may care to make along these lines. It is subject to revision as additional knowledge and experimentation are gained. We make no guarantee of results and assume no obligation or liability whatsoever in connection with this information

CHNICAL DATASHEE

Terbekehofdreef 50-52 B-2610 Wilrijk

phone +32 3 828.94.95 fax +32 3 830.27.69

info@tradecc.be www.tradecc.be



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- 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 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 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: $\pm 3 \text{ à } 5 \text{ kg/m}^2$ 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[®] 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

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