



0749 / EN 1504-4

 TECHNICAL  
DATASHEET

Terbekehofdreef 50-52  
B-2610 Wilrijk

phone +32 3 828.94.95  
fax +32 3 830.27.69

info@tradecc.com  
www.tradecc.com

## PC® 5800/BL

### Epoxy Glue

#### 1. Description

**PC® 5800/BL** is a two-component solvent-free epoxy glue.

#### 2. Applications

**PC® 5800/BL** is very well suited for gluing:

- PC® CarboComp carbon fibre laminates on concrete, wood and steel
- Steel plates to reinforce structures in concrete and metal
- Concrete elements

#### 3. Properties

The **PC® 5800/BL** is an epoxy glue with a very good adhesion to concrete, steel, carbon fibre laminates, ...

#### 4. Technical data (typical values)

- A-component: black paste
- B-component: white paste
- Density of the cured material: 1,75 g/cm<sup>3</sup>
- Evaluation of the reactivity at 20°C: time needed for a mixture of 1030 g PC® 5800/BL A and 470 g PC® 5800/BL B to rise in temperature from 20°C to 40°C: 85 minutes
- Mixing ratio: 5,15 kg A / 2,35 kg B
- Compression strength (EN 12190):
  - After 24 h at 20 °C: 56 N/mm<sup>2</sup>
  - After 7 days at 20 °C: 88 N/mm<sup>2</sup>
- Modulus of elasticity under compression (EN 13412): 7.5 GPa
- Flexural strength (EN 13892-2, after 7 d at 20 °C): 46 N/mm<sup>2</sup>
- Tensile strength (EN 527-2, after 7 d at 20 °C): 24.3 N/mm<sup>2</sup>
- Adhesion to concrete (EN 1542): > 2.5 N/mm<sup>2</sup> (rupture in concrete)
- Adhesion to metal (EN 1542): 23.83 N/mm<sup>2</sup>
- Shear strength at an orthogonal stress = 0 (EN 12188): 28 N/mm<sup>2</sup>
- Slant shear strength (EN 12188):
  - at  $\theta = 50^\circ$ : 63.7 N/mm<sup>2</sup>
  - at  $\theta = 60^\circ$ : 67.4 N/mm<sup>2</sup>
  - at  $\theta = 70^\circ$ : 92.5 N/mm<sup>2</sup>
- Shrinkage (EN 12617-1): 0.06 %
- Coefficient of thermal expansion (EN 1770): < 100 10<sup>-6</sup>/K
- Glass transition temperature T<sub>g</sub> (EN 12614): 78.36 °C
- Durability (thermal and moisture cycles according to EN 13733): pass according to the prescriptions of EN 1504-4.
- Pot life at 20 °C (EN ISO 9514): minimum 40 minutes

- Consumption:  $\pm 1,5 \text{ kg/m}^2$  per mm layer thickness

Width of PC® Carbocomp-laminate	Typical consumption(*) of PC® 5800 BL
50 mm	0,25 – 0,35 kg/m
60 mm	0,30 – 0,40 kg/m
80 mm	0,40 – 0,55 kg/m
90 mm	0,50 – 0,70 kg/m
100 mm	0,55 – 0,80 kg/m
120 mm	0,65 – 1,00 kg/m
150 mm	0,85 – 1,25 kg/m

\* Consumption is dependent on soil.

- Curing time: at 20 °C the support of the with **PC® 5800/BL** glued elements can be removed after 24 hours. The time indicated decreases at higher and increases at lower temperatures.
- Application temperature: minimum 10 °C, maximum 30 °C (both ambient as substrate temperature)
- Load bearing capacity: at 20 °C after 3 days completely load bearing / at 30 °C after 2 days / at 10 °C after 7 days.
- Shelf life: 24 months after production date in the original, unopened and undamaged packaging. **PC® 5800/BL** has to be stored in a dry place between +5°C and 30°C.

## 5. Processing

- Mix the A- and the B-component until a uniform grey mass is obtained.
- Apply this mixture on the plate which has to be glued by using a trowel, spatula or a gluing device.
- After positioning the plate on the structure which has to be reinforced, the plate is pushed onto the substrate until a minimum quantity of glue is forced out on both sides. Steel plates have to be jacked or bolted for at least 24 hours.

## 6. Packaging


- A-component: 5,15 kg
- B-component: 2,35 kg
- Weight of the mixture: 7,5 kg

## 7. Cleaning

Unreacted product can be removed with the cleaning agent PC® 5900.

## 8. Precautions and safety requirements

- Avoid contact with the skin and the eyes.
- Wear protective gloves, clothes and glasses.
- Prevent all contact of **PC® 5800/BL** with water.
- For more information: see Material Safety Data Sheet (MSDS).

 <b>0749</b>	
ECC N.V. Terbekehoofdreef 50 – 52 B-2610 Wilrijk  09  0749 - CPD BC2-564-1895-0003-001	
EN 1504-4 <b>Structural bonding for bonded plate reinforcement for uses other than low performance requirements (epoxy based)</b>	
Adhesion characteristics and suitability for application	Pull off strength $\geq 14$ N/mm <sup>2</sup> Slant shear strength at: 50° $\geq 50$ N/mm <sup>2</sup> 60° $\geq 60$ N/mm <sup>2</sup> 70° $\geq 70$ N/mm <sup>2</sup>
Suitability for application and curing under special environmental conditions	NPD
Durability (thermal and moisture)	Pass
Shear strength	$\geq 12$ N/mm <sup>2</sup>
Shrinkage/expansion	$\leq 0,1\%$
Modulus of elasticity in compression	$\geq 2000$ N/mm <sup>2</sup>
Modulus of elasticity in flexure	NPD
Workability	40 minutes at 20 °C
Coefficient of thermal expansion	$\leq 100 \times 10^{-6}$ per K
Glass transition temperature	$\geq 40$ °C
Reaction to fire	Euroclass F
Durability	Pass
Dangerous substances	comply with 5.4