

Unidirectional carbon fibre laminate for the structural strengthening of concrete, wood and steel.

APPLICATION

CARBOSTRIP UNI laminates are used for the structural strengthening of concrete, wood and steel. Because of their mechanical performance and easy application, CFRP laminates are replacing the traditional steel strips. CARBOSTRIP UNI laminates are commonly used for:

- General repair and renovation projects.
- Change of destination of a structure or building.
- Adaptation to new regulations and specifications.
- Design and dimensioning errors.
- For the structural repair of beams (bridges/ car parks/ industrial buildings/ high structures).
- For the reinforcement of walls (buildings/ tanks/ canals/ industrial structures/ elevator shafts/water tanks/ anti-seismic improvements).
- For the reinforcement of colons and pillars (seismic reinforcement/ pillars and colon of bridges, car parks and jetties).
- Applications in tunnels, channels and pipes.
- Applications in silo's, reservoirs and storage tanks.
- Reinforcement of chimneys.
- Reinforcement of plates/floors (industrial buildings/ concrete floors/ car park floors/ bridge decks/ balconies and terraces).

The use and application of CFRP strips for a particular job, should always be the result of a study and design of experienced civil engineers. Consult us for design and certified applicators.

DESCRIPTION

The CARBOSTRIP UNI is a unidirectional laminate with all fibres oriented in the longitudinal direction. The laminate comes with a handy peel ply ensuring easy application and a rough surface for perfect adherence on the substrate. The laminate does not need any cleaning before applying the epoxy adhesive, which results in a considerable gain of time during application.

APPLICATION PRESCRIPTIONS

The CARBOSTRIP UNI laminates are applied on the substrate with a special thixotropic adhesive with high Tg value. (cfr CARBOSTRIP ADHESIVE). A thorough preparation of the substrate/surface is crucial for an optimal performance of the carbon fibre. With the help of a handy gluing device the adhesive is equally spread on the laminate. The laminate is then applied in the right position and rolled on with a roller to avoid all air inclusions. The correct application of CFRP laminates according to local regulations and rules is crucial. In this respect we refer to the FIB recommendations or local guidelines.

PACKAGING

The CARBOSTRIP UNI strips are supplied on standard rolls of 100 meters. Laminates with a different width and thickness are available on request. Laminates with a higher elasticity modulus can also be obtained.

TECHNICAL DATA

Orientation of the fibres: unidirectional /longitudinal.

Peel ply: standard (or without peel ply).

CARBOSTRIP UNI		High Modulus	High Strength
Elasticity Modulus (Gpa)	Minimum value	210	165
Tensile strength (Mpa)	Minimum value	2800	3000
Elongation at break in %	Minimum value	1,2	1,7

STANDARD SIZES

Carbostrip High Modulus	Width (mm)	Thickness (mm)	Section (mm ²)
2014	20	1,4	28
5014	50	1,4	70
6014	60	1,4	84
8014	80	1,4	112
9014	90	1,4	126
10014	100	1,4	140
12014	120	1,4	168
15014	150	1,4	210

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USAGE

The average consumption of CARBOSTRIP ADHESIVE is as follows:

- Laminate width 50 mm: 0.25~0.35 kg/m
- Laminate width 60 mm: 0.30~0.40 kg/m
- Laminate width 80 mm: 0.40~0.55 kg/m
- Laminate width 90 mm: 0.50~0.70 kg/m
- Laminate width 100 mm: 0.55~0.80 kg/m
- Laminate width 120 mm: 0.65~1.00 kg/m
- Laminate width 150 mm: 0.85~1.25 kg/m

CARBOSTRIP SYSTEM (OVERVIEW)

CARBOSTRIP UNI is part of the complete range products in the CARBOSTRIP system:

- **CARBOSTRIP ADHESIVE**
Epoxy glue for carbon fibre laminates or steel plates
- **CARBOTEX UD**
Carbon fibre textile for structural strengthening
- **CARBOTEX IMPREG**
Epoxy resin for impregnation of carbon fibre textile
- **EPOXPRIM**
Epoxy primer for the preparation of the concrete when using EPOXMORTAR
- **EPOXMORTAR**
Epoxy mortar for concrete repair
- **EPOXINJECT**
Epoxy resin for structural repair of concrete by injection