

PRODUCT DATA

CARBOCOMP TEXTILE 600

DESCRIPTION

CarboComp Textile 600 is a unidirectional carbon fibre textile with strand oriented in the longitudinal direction. This textile is adhered to surfaces with 5800 Carbo LPL.

APPLICATIONS

Increasing the bearing capacity of columns in structures and buildings and shear strengthening of beams.

Examples include:

- Restoration of the original load bearing capacity, eg. after fire damage or corrosion of embedded reinforcement.
- Increasing the load bearing capacity of beams and columns.
- Repair of construction errors.
- Façade strengthening.

ADVANTAGES

- High tensile strength and stiffness.
- Easy to apply.
- Minimal creep.
- Flexible in use.
- Excellent corrosion, acid and alkali resistance.
- High durability.
- Minimal thermal expansion.
- Maintenance free, does not corrode.
- Suitable for both wet and dry lay process.

PREPARATION

Concrete must be properly prepared, dry and free of all wax, grease, oils, loose or foreign materials. Concrete surfaces should be prepared by abrasive blast, shot blast or other mechanical means to achieve a roughened, open surface texture (ICRI CSP 2-5).

Adhesive strength of the concrete and preparation should be verified by pull-off testing in accordance with ASTM D7234, to a minimum of 1.5 MPa (216 PSI) and achieve full substrate failure (Type A or Type B) or as specified by Engineer.

Uneven surface must be filled with a compatible repair/levelling material prior to the application of the strengthening system. Consult Stonhard or refer to Engineer's specification for appropriate repair materials.

TYPICAL DATA (TYPICAL VALUES)

Fibre Properties	Technical Characteristics
Weight:	600 g/m ²
Roll Width:	550 mm
Roll Length:	100 m
Primary Fibre Direction:	0°
Carbon Content:	99%
Tensile Strength:	4,000 MPa
Tensile Modulus:	240 G Pa
Maximum Elongation:	1.7%
Density:	1.8 g/cm ³
Carbon Fibre Areal Weight:	594 g/m ²
Fabric Design Thickness:	0.334 mm
Tensile Strength per Inch Width:	33.9 kN
Water Absorption:	<0.1 percent by weight
Electrical Resistivity:	0.0016 Ω - cm
Operating Temperature:	-40°C to +130°C

Laminate Properties	Technical Characteristics
Tensile Strength (Ultimate):	2,920 N/mm ²
Tensile Modulus:	253,000 N/mm ²
Tensile Elongation:	1.16%
Ply Thickness:	2.4 mm

The above values are typical and for indicative purposes only. The properties obtained from tensile test are dependent on the impregnating/laminating resin used and the type of tensile testing procedure. Apply material reduction factors according to relevant design standards and local building codes.

MIXING

Proper mixing of the structural adhesive is critical to the success of the strengthening system. Refer to CarboComp 5800 LPL product data sheet for proper mixing instructions.

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APPLYING - DRY LAY

Apply a primer layer of Carbo 5800 LPL resin onto the prepared surfaces of the element to be reinforced. Press the CarboComp Textile into the wet resin and roll with a profiled roller to remove entrapped air. Immediately after rolling, apply a second layer of 5800 Carbo LPL to fully saturate the carbon fibre textile. The consumption of 5800 Carbo LPL varies depending on the roughness and porosity of the surface (estimated consumption: 1000-1500 g/m²).

APPLYING - WET LAY

Applying a primer layer of CarboComp 5800 LPL resin onto the prepared substrate of the element to be reinforced. Saturate the CarboComp textile in a suitable resin bath. Ensure the fibers are fully "wet out" and apply to the surface to be strengthened. Apply saturated textile in such a way as to eliminate air entrapment. Once the textile is in place, use brushes, or profiled rollers to remove any remaining trapped air. Finish the exposed surface of the CarboComp by brush to provide even resin distribution (estimated consumption 1250 - 1750 g/m²).

PROTECTIVE COATINGS

Should additional protective coatings be required, apply a layer of adhesive evenly over the surface and broadcast with quartz aggregate to provide mechanical key. Allow to cure for 24 hours and then apply chosen coating system. For full exposure exterior service, Stonhard recommends Carboguard 690 and Carbothane 134.

FIRE PROTECTION

In certain design instances, protection of the carbon fibre strengthening system from fire will require subsequent layers of fireproofing to meet code or owner's requirements. Stonhard offers various fireproofing systems compatible with the CarboComp system. Please contact Stonhard Technical Services for recommendations.

NOTES

- Safety Data Sheets for CarboComp Textile 600 products are available upon request.
- A staff of Technical Service Engineers is available to assist with installation or to answer questions related to CarboComp Textile 600 products.
- Requests for technical service or literature can be made through local sales representatives and offices or corporate offices located worldwide.

Important:

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