



LOCTITE RENEWWRAP CF650-BX with XPL Saturant

Bi-Axial Carbon Fiber Reinforcing Fabric

LOCTITE RenewWrap CF650-BX is a dry, bi-axial +/-45° reinforcing fabric made with high strength, standard modulus carbon fibers. LOCTITE RenewWrap CF650-BX fabric, along with LOCTITE RenewWrap XPL Saturant are used to strengthen or retrofit existing concrete and masonry structures.

TYPICAL USES

Recommended for:

- Strengthen for load increases
- Address changes in structural system, like slab openings
- Retrofit for seismic, wind, or blast
- Restore strength to damaged members like fire or vehicle impact
- Restore strength to deteriorated members subject to corrosion
- Strengthen for design/construction errors

RELEVANT INFORMATION

- Design calculations shall be made and sealed by a licensed, independent engineer knowledgeable with the design of FRP strengthening systems.
- Avoid completely encapsulating/covering concrete or masonry members subject to freeze/thaw or moisture vapor transmission.

STORAGE AND SHELF LIFE

Store in a cool, dry place at 50-90 °F (10-32 °C) on a roll suspended in a box away from flame or other hazards. Shelf life is 10 years in unopened packaging.

PACKAGING

Available in 150 Feet (45.7m). long rolls suspended in boxes. Yield equals 625 ft²/roll (58 m²)

PRODUCT DESIGNATION

LOCTITE RenewWrap CF650-BX is available in a total reinforcement width of 50 in (1270 mm).

BENEFITS

- Less layers required
- Proven long term performance
- Easy to impregnate using wet or dry lay-up methods



CAUTION

LOCTITE RenewWrap carbon fabrics are nonreactive. Wear appropriate PPE and use caution when handling since fine carbon dust may be present on surface of fabric. Use caution when cutting or working with carbon fiber around electrical equipment since carbon fibers are electrically conductive. SDS are available and should be consulted for additional information.

ENGINEERING SUPPORT

GeoTree Solutions provides no-cost, pre-bid, engineering support. Contact your sales representative for more information.





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Bi-Axial Carbon
Fiber Reinforcing Fabric

Typical Dry Fiber Properties¹

PROPERTY	VALUE
Fiber Type	Carbon
Color	Black
Fabric Construction	Bi-Axial
Fiber Tensile Strength	740 ksi (5100 MPa)
Fiber Tensile Modulus	35,000 ksi (242 GPa)
Fiber Rupture Strain	2.1%
Fabric Areal Weight	18.5 oz./yd ² (630 gsm)

Notes:

1. Fiber properties are typical values of the fibers used in the manufacture of the reinforcing fabrics. They are reported here to provide the designer with a general understanding of the grade of fibers used in the reinforcing fabrics.

Physical properties

PROPERTY	VALUE	TEST METHOD
Nominal Thickness ²	0.034 inch (0.86mm)	ASTM D1777

Mechanical properties

(measured in the primary fiber direction +/- 45° direction)

ACI 440.2 DESIGN PROPERTIES	VALUE	METHOD
Tensile Strength	87.8 ksi (605 MPa)	ASTM D3039
Tensile Modulus of Elasticity ³	7.27 Msi (50GPa)	ASTM D3039
Elongation at Break	1.45%	ASTM D3039
Tensile Strength/Unit Width	3.0 kip/in./ply (0.52 kN/mm/ply)	ASTM D3039 / ASTM D7565
Tensile Modulus/Unit Width ³	250 kip/in./ply (43.3 kN/mm/ply)	ASTM D3039 / ASTM D7565

Notes:

2. The laminate reported thickness is based on measurements made on panels prepared in the laboratory, per ASTM D1777. Actual thicknesses measured in the field may vary slightly. As with any FRP strengthening system, the strength/unit width and modulus/unit width should be used for design and for field QC purposes.

3. Modulus of elasticity and unit stiffness are reported as average values in accordance with ACI 440.2 and shall be used for design. They shall not be used for accepting/rejecting results of field QC test results.

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Before using any GeoTree product, the user must review the most recent version of the product's technical data sheet, safety data sheet and other applicable documents, available at www.geotreesolutions.com or by calling +1.855.655.6750.



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