



LOCTITE RENEWWRAP CF1400 with LPL Saturant

LOCTITE RenewWrap CF1400 is a dry, unidirectional reinforcing fabric made with high strength, standard modulus carbon fibers. RenewWrap CF1400 fabric, along with LOCTITE RenewWrap LPL 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 300 ft²/roll (27.8 m²)

PRODUCT DESIGNATION

LOCTITE RenewWrap CF1400 is available in a total reinforcement width of 24".

PRODUCT DESIGNATION	NO. OF FABRIC ZONES	ZONE WIDTH
CF1400 – 1 x 24	1	24in. (610mm)

Unidirectional Carbon
Fiber Reinforcing Fabric
ICC-ES ESR-3663

BENEFITS

- ICC-ES ESR-3663 listed product
- 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.



Henkel Adhesive Technologies



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Typical Dry Fiber Properties¹

PROPERTY	VALUE
Fiber Type	Carbon
Color	Black
Fabric Construction	Unidirectional
Fiber Tensile Strength	700 ksi (4830 MPa)
Fiber Tensile Modulus	33,400 ksi (230 GPa)
Fiber Rupture Strain	2.0%
Fabric Areal Weight	40 oz./yd ² (1361 gsm)

Flame Spread and Smoke Density: The LOCTITE RenewWrap system yields a Class 1 and Class A flame-spread and smoke-density, per ASTM E84 in accordance with Section 802.2 of the UBC and Section 803.1 of the IBC, respectively. The thickness is limited to a maximum of one layer for CF1400 for this performance.

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	0.083 inch (2.1mm)	

Mechanical properties

PROPERTY	VALUE	METHOD
Tensile Strength	105.8 ksi (730 MPa)	ASTM D3039
Tensile Modulus of Elasticity ³	11.5 Msi (79GPa)	ASTM D3039
Elongation at Break	0.92%	ASTM D3039
Tensile Strength/Unit Width	8.8 kip/in./ply (1.53 kN/mm/ply)	ASTM D3039 / ASTM D7565
Tensile Modulus/Unit Width ³	954 kip/in./ply (167 kN/mm/ply)	ASTM D3039 / ASTM D7565

Notes:

2. The laminate reported thickness is based on measurements made on panels prepared in the laboratory. Based on experience the typical thickness of a single ply (fibers + saturant), impregnated with LPL saturant is approximately 0.08 inch depending on how the fabric is impregnated in the field. 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.

GeoTreeSolutions.com | +1 855 655 6750

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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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