

CFL-1000

Heavy-Duty, Carbon Fiber Laminate Strip

Description

Advanced FRP Systems' **CFL-1000** is a high-strength, high-modulus, pre-cured carbon fiber laminate strip designed to provide structural reinforcement for steel, concrete, timber and masonry structures. **CFL-1000** is manufactured through a pultrusion process to ensure the ideal ratio of resin to carbon fiber for optimal strength. Designed to be used with our **FRP 100 – Tack Coat** as a structural adhesive, these laminate strips should be used anywhere a lightweight, easy to apply, high strength reinforcing system is required.

Product Advantages

- More than 5 times the tensile strength of carbon steel
- Zero VOC polymeric adhesive
- Corrosion resistant Vinyl Ester Resin
- Available in various lengths
- Thickness of 200 mils (0.20 inches) for single layer reinforcement
- Shrouded in Glass Fiber to prevent galvanic corrosion
- Low Coefficient of Linear Thermal Expansion

Suggested Application

Used in conjunction with **FRP 100 – Tack Coat**, **CFL-1000** is ideal for reinforcement of damaged or corroded I-Beams, cracked Girders, damaged Tanks, failing decking, deteriorated concrete ,or structural timber. The incredible strength-to-weight ratio of Carbon Fiber Composites makes these systems easy and economical to apply.

Performance Data

	Test Method	Results
Coefficient of Linear Thermal Exp.	ASTM E831	4.89 x 10 ⁻⁶ in/in °F
Tensile Strength	ASTM D3039	Actual Value: 290,000 psi Design Value: 255,000 psi
Young's Modulus	ASTM D3039	20,015 ksi
Transverse Tensile Strength	ASTM D3039	Actual Value: 5,600 psi Design Value: 4,928 psi
Interlaminar Sheer Strength	ASTM D2344	8,000 psi
Flexural Strength	ASTM D790	Actual Value: 217,556 psi Design Value: 191,450 psi
Flexural Modulus	ASTM D790	19,580 ksi
Compressive Strength	ASTM D695	Actual Value: 194,350 psi Design Value: 171,030 psi
Elongation at Break	ASTM D 3039	1.3%
Fiber Content		70% by Volume

Product Characteristics

Finish: Gloss

Color: Black

Density: 1.60 g/mL

Standard size is 5 mm (0.20") thick by 105 mm (4.12") in width.

Sold FOB Weymouth, MA

Available in 5 ft., 8 ft., and 12 ft. lengths. Additional lengths and sizes may be available. Contact Advanced FRP Systems for details on custom sizes.

Consult FRP 100 – Tack Coat product data sheet for information on adhering carbon fiber laminate strips to various substrates. Always ensure proper surface preparation is followed and Laminate strips are clean, dry and free of dust/oil prior to installation. CFL-1000 may chalk or discolor if exposed to UV radiation. If outdoor aesthetics are a concern, then a UV stable topcoat is recommended.

Storage and Shelf Life

CFL-1000 must be stored between 0 – 140 °F, out of direct sunlight. If stored in these conditions, the product will have a 5-year shelf life.

Safety Precautions

Please consult up-to-date Safety Data Sheets (SDS's) prior to use. An SDS should be available on site whenever Advanced FRP products are being used.

Warranty Information

Advanced FRP Systems, Inc. warrants that our products are free of manufacturing defects in accordance with applicable Advanced FRP quality control parameters. Liability for products proven defective, if any, is limited to replacement of defective product or refund of purchase price as determined by Advanced FRP Systems. Additional warranties and protection are available. Contact Advanced FRP for more information.

Disclaimer

The information and recommendations set forth upon this data sheet are based on years of laboratory and field analysis. This information is intended to be used as guidance only as many factors affect the performance of polymeric systems. Actual exposure conditions are the best test of suitability and Advanced FRP Systems will generally provide complimentary samples for field testing.

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