

CF-300 BD

Medium-Weight, Bi-directional Carbon Fiber

Description

Advanced FRP Systems' **CF-300 BD** is a 3K, 2 x 2 twill weave, 10 oz/yd², bi-directional carbon fiber woven fabric. **CF-300 BD** is made in the USA. This material is engineered to provide extremely strong, durable and lightweight composites for long term structural reinforcement. **CF 300-BD** is easy to saturate and will mold to any shape or size. Excellent material for small diameter pipe repair.

Product Advantages

- Bi-directional weave provides outstanding strength in all directions.
- Lightweight, pliable fabric easily conforms to any shape
- Stable twill weave orientation
- Only 19 mils (0.019 inch) per layer
- Single or multi-layer systems available
- Coefficient of Thermal Expansion close to carbon steel

Suggested Application

CF-300 BD is commonly used for the reinforcement of steel pipes, concrete pipes, steel and fiberglass tanks as well as heat exchangers and pressure vessels.

Performance Data

Cured with FRP Saturant 200

	Test Method	Results
Coefficient of Linear Thermal Expansion	ASTM E831	3.78 x 10 ⁻⁶ in/in °F
Tensile Strength	ASTM D3039	Actual Value: 91,000 psi Design Value: 72,800 psi
Young's Modulus	ASTM D3039	Actual Value: 4,700 ksi Design Value: 3,760 ksi
Poisson's Ratio	ASTM D3039	0.088
Lap Shear	ASTM D3165	3,250 psi
Elongation at Break	ASTM D3039	2.5%
Flexural Strength	ASTM D790	Actual Value: 98,100 psi Design Value: 78,480 psi
Effective Fabric Thickness		0.019 in

Product Characteristics

Finish: Gloss

Color: Black

Density: 1.75 g/mL

CF-300 BD is sold by the yard. Available in 6" and 12" widths.

Sold FOB Weymouth, MA

Consult Saturating resin and tack coat data sheets for cure data and application information. CF-300 BD is designed to be used exclusively with Advanced FRP Systems epoxy saturating resins. FRP Saturant 200 is recommended for general applications, FRP Saturant 210 HT for elevated temperature applications, and FRP Saturant 220 C for chemically-resistant applications.

Storage and Shelf Life

CF-300 BD 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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