

## 530 Plain Weave Carbon Fiber Fabric



**Overview:** Graphite fibers contain up to 95% carbon and yield the highest tensile strength in the FRP industry. These fibers woven together form graphite fabric. These fabrics offer higher strength and stiffness-to-weight ratios than any other commonly available reinforcements. While there are hundreds of types to choose from, we have selected three styles of standard modulus carbon fiber which are suitable for use in racing, aircraft, competition marine, and light industrial applications. To maximize the fiber properties we recommend using only epoxy or vinyl ester resin, although polyesters will bond to the fabrics. This plain weave carbon fiber is the most commonly used type for lightweight aerodynamic parts.

Only three layers are typically necessary to produce non-structural pieces. It wets out quickly and handles easily.

Available in 1, 3, and 5 yard packages; custom cuts of 10 yards or more; and full rolls.

### General Properties for Carbon Fiber Fabrics:

- Lightweight
- High Modulus
- High Strength
- Fire Resistant
- Dimensionally Stable
- Fatigue Resistant

### Specific Product Properties

Weave Pattern	Plain
Yarn Description	Warp: 3K Multifilament Cont. Tow
	Fill: 3K Multifilament Cont. Tow
Count (Ends x Picks) inches	12.5 x 12.5
Weight	5.7 oz/yard <sup>2</sup>
Thickness	0.012 inches
Roll Width	50 inches

### Weave Pattern Rankings:

	Thickness	Weight	Strength	Porosity
<b>Plain</b>	3	1	3	1
<b>Twill</b>	2	1	4	2
<b>4-Harness Satin</b>	3	1	4	2
<b>8-Harness Satin</b>	1	1	7	4
<b>Leno</b>	7	7	1	7
<b>Mock Leno</b>	6	1	2	4

This was a scale from 1 to 7, with 1 being the lowest and 7 being the highest.

## Resin Compatibility

Part Number	Polyester Resin	Vinyl Ester Resin	System 2000 Epoxy
292	X	X	P
530	X	X	P
596	X	X	P
597	X	X	P
598	X	X	P
660	X	X	P
1064	X	X	P
1069	X	X	P

A "P" is for the primary resin for the fabric.  
An "X" means the fabric is compatible with the resin.  
The compatibility is based on Fibre Glast Development's resins only