

# CARBON GRAPHITE

## BIDIRECTIONAL WOVEN CARBON GRAPHITE



282

Woven graphite is a fabric introduced in recent years which has become an excellent alternative to fiberglass and Kevlar - only mils thick with great strength. In addition to its great strength, graphite fabric also has very low density and is very stiff. Although it is quite costly, the material saving is appreciable since only one course of graphite is required for 3 or 4 of fiberglass. It cuts considerably easier than Kevlar. The excellent qualities of the graphite fabric itself give it an immediate waiting market in the aircraft building field. Graphite fabric is stocked in the three different styles shown below. Other weights and weaves of graphite are available on a special order basis. Be sure to specify the graphite style when ordering. These carbon graphite cloths are not pre-preg fabrics. **\* Warning folding for shipment can damage the filaments in the fabric. Folding will be done at customers' risk and request only.**

### CARBON FIBER - Plain Weave - Style 282

| Part No. | Weight oz./Sq Yd. | Width | Thick-ness | W x F     | Tensile Strength (KSI) | Price /yd. |
|----------|-------------------|-------|------------|-----------|------------------------|------------|
| 01-00971 | 5.8               | 50"   | .007"      | 12.5x12.5 | 675                    | .          |
| 01-28260 | 5.8               | 60"   | .007"      | 12.5x12.5 | 675                    | .          |

### TWILL - 2 X 2 WEAVE - Style 284

| Part No. | Weight oz./Sq Yd. | Width | Thick-ness | W x F | Tensile Strength (KSI) | Price /yd. |
|----------|-------------------|-------|------------|-------|------------------------|------------|
| 01-00602 | 5.7               | 50"   | .007       | 12X12 | 675                    | .          |
| 01-01232 | 5.8               | 60"   | .007       | 12X12 | 675                    | .          |



## STANDARD E-GLASS & FIBERGLASS TAPES

Tapes are woven from 8.7 oz./sq. yd. fiberglass cloth, .012" thick, into narrow widths with non-raveling selvage. Perfect for glassing seams, corners, edges fan for repair jobs. Sold in 50 yd. rolls.

1" Width 26 Warp, 17 Fill ..... P/N 01-06610 ..... Roll .  
 2" Width 40 Warp, 17 Fill ..... P/N 01-06600 ..... Roll .  
 3" Width 58 Warp, 17 Fill ..... P/N 01-06700 ..... Roll .  
 4" Width 76 Warp, 17 Fill ..... P/N 01-06705 ..... Roll .  
 6" Width 106 Warp, 17 Fill ..... P/N 01-06710 ..... Roll .  
 12" Width 218 Warp, 17 Fill ..... P/N 01-06720 ..... Roll .

## UNIDIRECTIONAL CARBON 50K



Carbon Fiber Fabric Unidirectional 50k 200gsm/ 5.9oz 50" Zoltec PX35 Fiber.

### Specifications:

• Tensile Strength: 600ksi • Tensile Modulus: 35msi • Electrical Conductivity: 0.00061 ohm-in • Density: 0.065 lb/in3 • Fiber Diameter: 0.283 mils • Carbon Content: 95% • Yield: 397 ft/lb • Spool Weight: 12 lb, 24 lb • Spool Length: 1640yd, 3280yd... P/N 01-01609 .....

## UNIDIRECTIONAL CAP FIBERGLASS TAPE



This 54 Yard roll of woven unidirectional tape consists of a plain weave construction with at least 80% of the fabric weight in the 0° or Warp direction.

This unidirectional tape can be used instead of unidirectional fabric for spar caps, wings and elevators. Contours well and cuts building time considerably. May be used with either polyester or epoxy systems. Used on Polliwagen. Long-

EZ, Cozy. Adventure and applicable to all composites. • Fiber: E-Glass Fiberglass • Product Type: Woven Tape • Construction: Unidirectional • Density: 850 g/m2 • Width: 3" (75 mm) • Length: 54 Yards • Finish: Silane..... P/N 01-01651 .....

## UNIDIRECTIONAL CARBON FIBER FABRIC 50



Intermediate Modulus Hexcel IM2 UNI Directional Carbon Fiber Fabric/Cloth 12k 5.7oz/193gsm. This fabric has a tow size of 12k and is a UNI Directional Fabric.

Fiber type - Fiber type available is a Hexcel IM2 12k Intermediate Modulus Fiber. This yarn is smaller in size than a standard 12k yarn and visually replicates the look of a standard strength 6k carbon fiber yarn while offering over a 60% increase in tensile strength and reducing the weight in almost half. Pound for pound the IM2 offers a material approximately 2.5 times stronger

than a standard carbon fiber yarn. Note: To harden the raw fabric into a usable form, you will need the appropriate resin or epoxy for your project. 50" Wide ..... P/N 01-01664 ..... /Yd.

## CARBON FIBER TUBING



Aircraft Spruce offers structural tubing and structural torsion tubing, engineered and built to meet your exact specifications and tolerances. Structural Torsion Tubing, in continuous lengths up to 40', is manufactured with the computer-controlled, fully-automated Helical Winding Process. We offer a broad array of Fiber Options and tubing wall thickness and diameter is determined on a case-by-case basis to suit your application.

**Special Order Sold in 10 ft. lengths only (can cut for UPS shipment).**

\*The image shows two types of finish on this product. The standing tube is sanded and painted with a gloss finish. This is available for an additional cost of .. The tube lying on its side is a rough surface, which will be received when

product is purchased.

| D of Tube | Wall Thickness | Length | Part No. | Price |
|-----------|----------------|--------|----------|-------|
| 0.5"      | .100           | 10'    | 03-00171 | .     |
| 0.75"     | .100           | 10'    | 03-00172 | .     |
| 1.00"     | .120"          | 10'    | 03-00173 | .     |
| 1.25"     | .120"          | 10'    | 03-00174 | .     |
| 1.5"      | .120"          | 10'    | 03-00175 | .     |
| 1.75"     | .120"          | 10'    | 03-00176 | .     |
| 2"        | .120"          | 10'    | 03-00177 | .     |
| 2.5"      | .120"          | 10'    | 03-00178 | .     |
| 3"        | .120"          | 10'    | 03-00179 | .     |

## CARBON GRAPHITE YARN TOW



High strength (470,000 PSI) carbon fibers are used as reinforcement in high performance structural composites for aircraft applications, recreational and industrial products. Carbon fiber filaments are finer than a human hair. These filaments are bundled together to make a fiber of 3,000, 6,000 or 12,000 filaments which is called a "tow". The tow is sized with an epoxy compatible material to improve the handling characteristics. It is then wound on a cardboard core holding from 4 to 6 pounds of fiber. 1 Lb. spool.

It appears that the 6K tow will prove most practical for homebuilding applications. This size will be available in the small units shown. The 3K and 12K sizes are offered in full spools only. The 3K tow is used primarily by weavers. The 12K is difficult to wet out but can be done by diligent brushing.

| Actual Size | Part No. | Approx. Yield | Roll Size | Price/Spool |
|-------------|----------|---------------|-----------|-------------|
| 12K Tow     | 01-00004 | 621 Yd./Lb.   | 2 Lb.     | .           |
| 12K Tow     | 01-00345 | 621 Yd./Lb.   | 4 Lb.     | .           |