ZOLTEK CARBON FIBER

Zoltek's Carbon Fiber Tow

Zoltek's Carbon Fiber Fabric

Zoltek's Chopped Carbon Fiber

Zoltek's Pultruded Carbon Fiber Plates

WHAT IS CARBON FIBER?

A carbon fiber is a long, ultra-thin strand of material (each strand is 100 times thinner than a human hair), composed mostly of carbon atoms. These atoms are bonded together in a way that makes the fiber incredibly strong. **In fact, carbon fibers are 10 times stronger than steel and 8 times stronger than aluminum, but still weigh much less!** Zoltek brings 50,000 strands of these fibers together in a single ribbon to create our carbon fiber tow.

Zoltek carbon fiber is joined with other materials to create a composite. These composite materials are used to make aircraft parts, racing car bodies, golf club shafts, bicycle frames, fishing rods, automobile springs, sailboat masts, and many other components which require light weights and high strength.

HOW IS CARBON FIBER MADE?

The raw material used to make carbon fiber is called the **precursor**. This precursor is drawn into long strands, or fibers, and then heated to a very high temperature without allowing it to come in contact with oxygen. Without oxygen, the fiber cannot burn. Instead, the high temperature causes the atoms in the fiber to vibrate violently until most of the non-carbon atoms are removed. This process is called **carbonization** and leaves a fiber composed of long, tightly inter-locked chains of carbon atoms with only a few non-carbon atoms remaining.

HOW IS CARBON FIBER USED?

Zoltek's carbon fiber is used in a variety of applications. It is the best value proposition of any other carbon fiber with market-leading properties at a market-leading price.

- Wind Energy
- Automotive
- Oil & Gas
- Infrastructure
- Fireblocking Layer Fabric
- Marine
- Aircraft Brakes and Interiors
- CNG/Pressure Vessels
- Energy Storage
- Sporting Goods
- Thermoplastic Compounding

CARBON FIBER APPLICATIONS

Aircraft Brakes

Marine

Automotive

Wind Energy

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