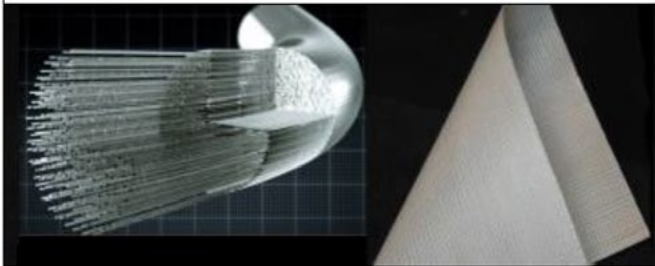





Fiber Type Comparison

eFiber and Mesh	Polyethylene
	
<p>Silanized E-glass fibers preimpregnated (PMMA and BisGMA) with polymer. Leads to excellent bonding to acrylics, composites, and lightcuring resins which are used to wet the fibers.</p>	<p>Polyethylene fibers. Does not bond well to the surrounding matrix (acrylics or light curing resins). The plasma treatment that will make the bonding stronger has no effect after a couple of days. After manufacturing, packaging, and distribution there is little of plasma treatment effect left. Nonbonding fibers are just sliding inside the structure under biting forces.</p>
<p>Preimpregnation</p>	
<p>Porous PMMA and BisGMA</p>	<p>NONE</p>
<p>Wetting</p>	
<p>No wetting needed for eFiber.</p> <p>Perma Fiber needs wetting.</p> <p>IMPORTANT! Wets easily because of the PMMA preimpregnation. Easy to achieve complete wetting. Acrylics, composites, and light curing resins fill the space between the individual fibers. This means that every single fiber takes</p>	<p>Difficult to achieve complete wetting.</p> <p>Only wetted fibers are resisting the bite forces. Air between fibers will weaken the structure considerably. Color changes and bacterial colonization are symptoms of poorly wetted fiber composites.</p>

<p>part in the reinforcement process. Bacteria adheres poorly to smooth surfaces. Total dissolution/molecular bonding.</p>	
<p>Flexural Strength</p>	
<p>Up to 800 MPa</p>	<p>Up to 300 MPa</p>
<p>Properties</p>	
<p>Easy to grind, finish, and polish. Allows for better esthetics, strength, and hygiene.</p> <p>No special tools needed.</p> <p>Fibers may be handled.</p>	<p>Difficult to grind or finish due to the properties of the polyethylene fibers. Fibers must be covered with acrylic or composite to be able to polish the surface.</p> <p>Can not handle polyethylene directly. Special tools are needed.</p>

For more information, contact Preat at 1-800-232-7732 or visit preat.com