



## VERTEC 5010

Compression Molded

VERTEC 5010 is a glass fiber reinforced PEEK (polyetheretherketone) material. It exhibits higher modulus than VERTEC 5000 (neat PEEK), thus offering more resistance to deformation under load at elevated temperatures. This material is an ideal candidate for many structural component applications carrying high static loads. Due to the abrasiveness of glass fibers, its use against soft metal surfaces in dynamic applications must be carefully examined.

<i>Physical Properties</i>	<i>ASTM Method</i>	<i>Typical Values</i>
Specific Gravity	D792	1.52 gr/cm <sup>3</sup>
Water Absorption (24hrs. @73.4 °F)	D570	.15 %
Color	N/A	Tan

<i>Mechanical Properties</i>		
Tensile Strength	D1708/D638	15,500 psi
Tensile Elongation	D1708/D638	3 %
Flexural Strength	D790	28,200 psi
Flexural Modulus	D790	1.1 10 <sup>6</sup> psi
Compressive Strength	D695	19,100 psi
Compressive Modulus	D695	502,000 psi
Impact Strength (Izod, notched)	D256	
Hardness	Shore D	90

<i>Tribological Properties</i>		
Coefficient of Friction		
Static	D3702	
Dynamic	D3702	.4
Wear Rate (PV: 20,000 psi-fpm)	D3702	

<i>Thermal Properties</i>		
Coefficient of Linear Thermal Expansion (78 to 300 °F)	D696	14 10 <sup>-6</sup> /°F
Heat Deflection Temperature (@264 psi)	D648	450 °F
Glass Transition Temperature (T <sub>g</sub> )	D3418	289 °F
Continuous Service Temperature (Max @ no load)		480 °F
Melting Point		644 °F

<i>Electrical Properties</i>		
Volume Resistivity	D257	
Dielectric Strength	D149	550 KV/mm
Dielectric Constant	D150	

*Note: Property values should be interpreted as typical rather than minimum value.* All technical information and recommendations are presented in good faith, based upon laboratory and real-world tests believed to be reliable and practical. However, Vertec Polymers cannot guarantee the accuracy or completeness of this information, and it is the customer's responsibility to determine product suitability to any given application.

Rev. Date 05/2004