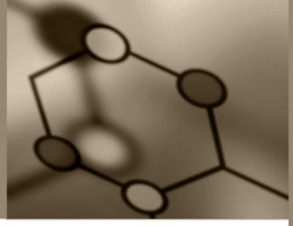

VERTEC 5020

Compression Molded

VERTEC 5020 is a bearing grade carbon fiber reinforced PEEK (polyetheretherketone) material. It offers higher modulus, mechanical strength and resistance to deformation under load than VERTEC 5010. Due to the presence of carbon fibers, thermal conductivity of this material is 3.5 times higher than VERTEC 5000 (unreinforced PEEK), thus it dissipates heat at a faster rate.

Physical Properties	***ASTM Method***	***Typical Values***	
Specific Gravity	D792	1.41	gr/cm^3
Water Absorption (24hrs. @73.4°F)	D570	.15	
Color	N/A	Black	
Mechanical Properties			
Tensile Strength	D638	19,000	psi
Tensile Elongation	D638	4	%
Flexural Strength	D790	25,200	psi
Flexural Modulus	D790	1.3	10^6 psi
Compressive Strength	D695	25,000	psi
Compressive Modulus	D695	550,000	
Impact Strength (Izod, notched)	D256		
Hardness	Shore D	90	
Tribological Properties			
Coefficient of Friction			
Static	D3702		
Dynamic	D3702	.24	
Wear Rate (PV: 20,000 psi-fpm)	D3702	3.3	µin/min
Thermal Properties			
Coefficient of Linear Thermal Expansion (78 to 400°F)	D696	25	10^{-6}/°F
Heat Deflection Temperature (264psi)	D648	450	°F
Glass Transition Temperature (Tg)	D3418		°F
Continuous Service Temperature (Max @ no load)		480	°F
Melting Load		644	°F
Electrical Properties			
Volume Resistivity	D257		10^{16} ohm-cm
Dielectric Strength	D149		KV/mm
Dielectric Constant	D150		50Hz, 200°C

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.

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