

## Typical Properties of PEEK (Polyether ether ketone)

Property	Units	Test Method ASTM	Value	
<b>MECHANICAL PROPERTIES</b>				
Specific Gravity	gm/cm <sup>3</sup>	D-792	1.31	
Tensile Strength	73 °F psi	D-638	14,000	
Tensile Modulus	73 °F psi	D-638	500,000	
Elongation, Break	73 °F %	D-638	4.9	
Flexural Strength	73 °F psi	D-790	24,700	
Flexural Modulus	73 °F psi	D-790	530,000	
Compressive Strength	73 °F psi	D-695	17,100	
Compressive Modulus	psi	D-695	500,000	
Impact Strength, Notched	73 °F ft-lbs/in	D-256	1.6	
Hardness, Rockwell	R	D-785	R126 (M99)	
Hardness, Durometer, Shore D	D	2240	-	
Shear Strength	psi	D-732	7,600	
Coefficient of Friction, against steel	-	-	0.40	
<b>THERMAL PROPERTIES</b>				
Deflection Temperature	66 psi °F	D-648	-	
	264 psi °F	D-648	320	
Maximum Temperature - Long Term	°F	-	482	
Maximum Temperature - Short Term	°F	-	-	
Melting Point	°F		633	
Coefficient of Linear Thermal Expansion	in/in/°F	D-696	2.6 x 10 <sup>-5</sup>	
Thermal Conductivity	Btu-in/hr-ft <sup>2</sup> -°F	C-177	1.75	
<b>ELECTRICAL PROPERTIES</b>				
Dielectric Strength	V/mil	D-149	480	
Dielectric Constant	1 kHz	D-150	3.30	
Dissipation Factor	1 kHz	D-150	0.003	
Flammability		UL 94	V-0	
Volume Resistivity	73 °F Ω.cm	D-257	-	
<b>WATER ABSORPTION RATES</b>				
Water Absorption at 73 °F	24 hours	%	D-570	0.5
	Saturation	%	D-570	0.5

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