



POLYMER INDUSTRIES

PEEK

TYPICAL PROPERTIES

Property	Test Method	Units	NATURAL AND BLACK Unfilled PEEK	PEEK Rg-30 30% Glass Fiber Filled	PEEK-L Bearing and Wear Grade
Mechanical					
Specific Gravity	ASTM-D792	---	1.32	1.51	1.44
Tensile Strength	ASTM-D638	psi	14,000	22,600	20,500
Tensile Elongation	ASTM-D638	%	60	2.7	2.5
Tensile Modulus	ASTM-D638	psi	620,000	1,000,000	1,200,000
Flexural Strength	ASTM-D790	psi	25,000	36,300	30,500
Flexural Modulus	ASTM-D790	psi	600,000	1,100,000	1,175,000
Compression Strength	ASTM-D695	psi	17,100	31,200	21,800
Izod Notched Impact	ASTM-D256	ft.- lb./in.	1.2	1.5	1.2
Rockwell Hardness	ASTM-D785	M or R scale	M99(R126)	M103(R124)	---
Thermal					
Coef. Of Linear Thermal Expansion	ASTM-D696	in./in./°F	2.6×10^{-5}	1.2×10^{-5}	1.2×10^{-5}
Max Continuous Temp.	Internal Std.	°F	480	480	480
Heat Defl. Temp. @ 264 psi	ASTM-D648	°F	320	600	>560
Melting Point	ASTM-D3418	°F	644	644	644
Electrical					
Dielectric Strength-Short Term	ASTM-D149	volts/mil	480	175	---
Dielectric Constant @ 60 Hz	ASTM-D150	---	3.5	3.7	---
Dielectric Constant @ 10 ⁶ Hz	ASTM-D150	---	3.2	3.70	---
Dissipation Factor @ 60 Hz	ASTM-D150	---	0.003	---	---
Volume Resistivity	ASTM-D257	ohm-cm	$>10^{16}$	$>10^{16}$	1.2×10^{10}
Miscellaneous					
Water Absorption/24 hours	ASTM-D570	% Weight	0.2	0.11	0.6
Water Absorption @ Saturation	ASTM-D570	% Weight	0.5	0.35	0.35
Dynamic Coefficient of Friction	Internal Std.	---	0.58	---	0.17
Flammability	UL-94	---	V-0 (0.125")	V-0 (0.125")	V-0 (0.125")
Agency Compliance					
FDA	---	---	No	No	No
USDA	---	---	No	No	No

Other PEEK Specialties Available- C30 Carbon Fiber Filled and Lf20 20% Teflon Filled

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