



MECHETEC®
PEEK



Polyetheretherketone (PEEK)



High Temperature Applications



High Chemical Resistance

APPLICATIONS

Pump Wear Rings
Medical Instruments
Bearings and Bushings
Analytical Instrumentation
Compressor Components

KEY FEATURES

480 °F Continuous Use Temperature
Easily Machined and Fabricated
Excellent Strength at High Temp.
Highly Resistant to Chemicals
Superior Electrical Properties
FDA Compliant

SHAPES AND SIZES

ROD DIAMETER

NATURAL	0.375" - 4.0"
BLACK	0.375" - 4.0"
Rg-30	0.50" - 2.75"
PEEK-L	0.375" - 4.0"

SHEET THICKNESS

NATURAL	0.25" - 2.5"
BLACK	0.25" - 2.5"
Rg-30	0.25" - 2.5"
PEEK-L	0.25" - 2.5"



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PEEK

	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 of Elasticity	ASTM-D638	psi	620,000	1,000,000	1,200,000
Flexural Strength	ASTM-D790	psi	25,000	36,300	30,500
Flexural Modulus of Elasticity	ASTM-D790	psi	600,000	1,100,000	1,175,000
Compressive Strength	ASTM-D695	psi	17,100	31,200	21,800
Izod Notched Impact	ASTM-D256	ft.-lb./in.	1.2	1.8	1.2
Rockwell Hardness	ASTM-D785	M or R scale	M99(R126)	M103(R124)	—
Thermal					
Coef. of Linear Thermal Expansion	ASTM-D696	in./in./deg F	2.6 x 10 ⁻⁵	1.2 x 10 ⁻⁵	1.2 x 10 ⁻⁵
Max. Continuous Use Temp.	Internal Std.	°F	480	480	480
Heat Deflection 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	3.7	—
Dissipation Factor @ 60 Hz	ASTM-D150	—	0.003	—	—
Volume Resistivity	ASTM-D257	ohm-cm	>10 ¹⁶	>10 ¹⁶	1.2 x 10 ¹⁰
Miscellaneous					
Water Absorption/24 hrs.	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	—	—	Yes	No	No
USDA	—	—	Yes	No	No

Other PEEK Specialities Available- C30 Carbon Fiber Filled and Lf20 20% Teflon Filled
Call for Details and Pricing

MECHETEC® is a registered trademark of Polymer Industries

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