



- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Ketron PEEK® HPV (Extruded)

Bearing Grade Polyetheretherketone

Carbon fiber reinforced with graphite and PTFE lubricants, our newest grade of PEEK offers the lowest coefficient of friction and the best machinability for all PEEK Grades. An excellent combination of low friction, low wear, high LPV, low mating part wear and easy machining, make it ideal for aggressive service bearings.

Mechanical Properties	Test Method ASTM	Value	Units
Specific Gravity, 73°F	D792	1.44	
Tensile Strength, 73°F	D638	11,000	psi
Tensile Modulus of Elasticity, °F	D638	850,000	psi
Tensile Elongation (at break), 73°F	D638	2	%
Flexural Strength, 73°F	D790	27,500	psi
Flexural Modulus of Elasticity, 73°F	D790	1,100,000	psi
Shear Strength, 73°F	D732	10,000	psi
Compressive Strength, 10% Deformation, 73°F	D695	26,700	psi
Compressive Modulus of Elasticity, 73°F	D695	1,000,000	psi
Hardness, Rockwell, Scale as noted, 73°F	D785	M85	
Hardness, Durometer, Shore "D" Scale, 73°F	D2240		
Izod Impact (notched), 73°F	D256 Type A	1	ft-lb/in of notch
Coefficient of Friction (Dry vs. Steel) Dynamic	QTM 55007	0.21	
Limiting PV (with 4:1 safety factor applied)	QTM 55007	20,000	ft.lbs./in. ² min
Wear Factor "k" x 10 ⁻¹⁰	QTM 55010	100	in. ³ -min/ft.lbs.hr
Thermal Properties			
Coefficient of Linear Thermal Expansion (-40°F to 300°F)	E-831 (TMA)	1.7 x 10 ⁻⁵	in/in./°F
Heat Deflection Temperature 264 psi	D648	383	°F
TG-Glass transition (amorphous)	D3418	289	°F
Meltin Point (Crystalline) peak	D3418	644	°F
Continuous Service Temperature in Air (Max.) (1)		482	°F
Thermal Conductivity	F433	1.7	BTU-in/hr-ft ² -°F
Electrical Properties			
Dielectric Strength, Short Term	D149	-	Volts/mil
Surface Resistivity	EOS/ESD S11.11	<10 ⁴	ohm/square
Dielectric Constant, 106 Hz	D150	-	
Dissipation Factor, 106 Hz	D150	-	
Flammability @ 3.1 mm (1/8 in.)	UL 94	V-0	

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*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes. Information provided above by Quadrant EPP.