



- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

### Material Data Sheet

Material: Ketron PEEK® 1000

Polyetheretherketone

This general purpose grade is unreinforced and offers the highest elongation and toughness of a PEEK grades. The Newly available black PEEK 1000 is ideal for instrument components where aesthetic are important, as well as for seal components where ductility and inertness are important.

Mechanical Properties	Test Method ASTM	Value	Units
Specific Gravity, 73°F	D792	1.31	
Tensile Strength, 73°F	D638	16,000	psi
Tensile Modulus of Elasticity, °F	D638	735,000	psi
Tensile Elongation ( at break), 73°F	D638	20	%
Flexural Strength, 73°F	D790	15,000	psi
Flexural Modulus of Elasticity, 73°F	D790	700,000	psi
Shear Strength, 73°F	D732	8,000	psi
Compressive Strength, 10% Deformation, 73°F	D695	20,000	psi
Compressive Modulus of Elasticity, 73°F	D695	500,000	psi
Hardness, Rockwell, Scale as noted, 73°F	D785	M100(R126)	
Hardness, Durometer, Shore "D" Scale, 73°F	D2240	D85	
Izod Impact (notched), 73°F	D256 Type A	1	ft-lb/in of notch
Coefficient of Friction (Dry vs. Steel) Dynamic	QTM 55007	0.4	
Limiting PV (with 4:1 safety factor applied)	QTM 55007	8,500	ft.lbs./in. <sup>2</sup> min
Wear Factor "k" x 10 <sup>-10</sup>	QTM 55010	375	in. <sup>3</sup> -min/ft.lbs.hr
<b>Thermal Properties</b>			
Coefficient of Linear Thermal Expansion (-40°F to 300°F)	E-831 (TMA)	2.6 x 10 <sup>-5</sup>	in/in./°F
Heat Deflection Temperature 264 psi	D648	400	°F
TG-Glass transition (amorphous)	D3418	N/A	°F
Melting Point (Crystalline) peak	D3418	644	°F
Continuous Service Temperature in Air (Max.) (1)		480	°F
Thermal Conductivity	F433	1.75	BTU-in/hr-ft <sup>2</sup> -°F
<b>Electrical Properties</b>			
Dielectric Strength, Short Term	D149	480	Volts/mil
Surface Resistivity	EOS/ESD S11.11	>10 <sup>13</sup>	ohm/square
Dielectric Constant, 106 Hz	D150	3.3	
Dissipation Factor, 106 Hz	D150	0.003	
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. Above information is provided by Quadrant EPP.