



PEKTRON PEEK

High Performance Compounds

Material & Design Solutions' (MDS) PEKTRON PEEK is an excellent choice for high temperature, high pressure applications in aggressive chemical environments. These injection molded PEEK compounds have been qualified for use up to 550°F (288°C) and 22,500 psi (0.16 GPa).

PEKTRON PEEK high performance thermoplastics offer outstanding chemical resistance and wear properties in a broad spectrum of industries and applications. The injection molded compounds demonstrate excellent resistance to hot water and steam and are unaffected by continuous exposure up to 550°F (288°C).

Finished Parts

MDS offers PEKTRON PEEK in the form of finished parts machined out of injection molded stock shapes for critical service applications.

Typical Applications:

- ▶ Valve seats
- ▶ Spring energized seals
- ▶ Bearings
- ▶ Backup rings
- ▶ Connectors
- ▶ Vee rings

Stock Shapes

MDS offers PEKTRON PEEK in the form of rods and tubes ranging from 1 in. to 21 in. (2.54 cm to 53.34 cm) diameter tubes.

PEKTRON PEEK Grades

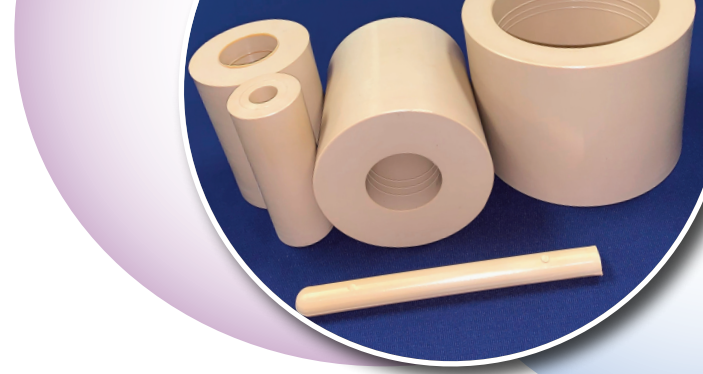
- ▶ **PEKTRON PEEK 1000 - Virgin PEEK**
 - Virgin PEEK has high elongation, is ductile with no springing issues, and has great impact strength.
- ▶ **PEKTRON PEEK 1030 - 30% Glass Filled PEEK**
 - Glass filled PEEK has increased strength, good creep resistance, and is not conductive.
- ▶ **PEKTRON PEEK 2030 - 30% Carbon Filled PEEK**
 - Carbon filled PEEK is conductive, has excellent strength, and good creep resistance.



FOR ENHANCED PERFORMANCE AT ELEVATED TEMPERATURES

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Property Chart

Material Properties	Test Method	Units	Typical Properties		
			PEKTRON 1000	PEKTRON 1030	PEKTRON 2030
Specific Gravity	ASTM D792 ISO 1183		1.30	1.51	1.41
			1.30	1.51	1.40
Tensile Strength	ASTM D638 ISO 527	psi	14,000	26,000	38,000
		MPa	98	185	265
Elongation	ASTM D638 ISO 527	%	40	2.8	5
		%	45	2.8	1.7
Flexural Modulus	ASTM D790 ISO 178	psi	550,000	1,500,000	3,400,000
		GPa	3.8	11	24
Hardness	ASTM D2240 ISO 868	Shore D	86	87	87
		Shore D	86	87	87
Heat Deflection Temperature	ASTM D648 ISO 75-f	°F	306	622	637
		°C	152	328	336
Coefficient of Thermal Expansion <289°F (< 143°C)	ASTM D696 ISO 11359	in/in/°F	2.6 x 10 ⁻⁵	1.2 x 10 ⁻⁵	0.8 x 10 ⁻⁵
		ppM K ⁻¹	55	18	5
Coefficient of Thermal Expansion >289°F (>143°C)	ASTM D696 ISO 11359	in/in/°F	6.0 x 10 ⁻⁵	1.2 x 10 ⁻⁵	0.8 x 10 ⁻⁵
		ppM K ⁻¹	140	18	5

About Material & Design Solutions

Material & Design Solutions is a committed partner in providing critical service industries with high performance components for a variety of sealing applications in high temperature, high pressure, and corrosive environments. MDS adds value, optimizes performance, and solves their customers' sealing problems by providing advanced sealing solutions for their most critical applications.



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