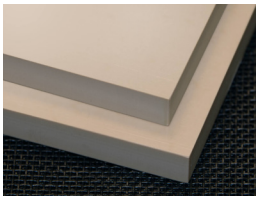
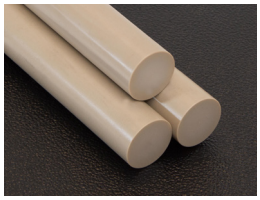
PEEK

Strong, stiff plastic with outstanding chemical resistance; performs over a wide range of temps


PEEK (polyetheretherketone) is a high-performance engineering plastic with outstanding resistance to harsh chemicals, and excellent mechanical strength and dimensional stability. It offers hydrolysis resistance to steam, water, and sea water. PEEK has the ability to maintain stiffness at high temperatures and is suitable for continuous use at temperatures up to 338°F (170°C). This engineering plastic has a proven track record in challenging environments such as aerospace, oil and gas, and semiconductor.

PEEK Material Options

Virgin PEEK (unfilled) – is naturally abrasion resistant.

Glass-Filled PEEK – offers enhanced mechanical and thermal properties over those of basic PEEK, plus excellent resistance in harsh chemical environments and is electrically insulative.

Bearing Grade PEEK – has enhanced bearing and wear properties. TECAPEEK® PVX is an ultra high performance bearing material with wear enhancing additives.

PEEK is widely used for:

- Semiconductor machinery components
- Aerospace parts
- Bushings, bearings, seals, and back-up rings
- Pump and valve components
- Vacuum wand handles
- Down hole electrical connectors
- Medical instrument parts
- Food processing machinery components

Performance characteristics:

- Strong and stiff
- Chemical resistant, hydrolysis resistant, autoclavable
- Easy to machine and fabricate
- Good mechanical properties at elevated temperatures
- UL 94 V-0 flammability rating (0.059" thickness)
- Very low smoke and toxic gas emissions when exposed to flame

Common brands:

- TECAPEEK®
- SustaPEEK
- Ketron®

Available in:

Sheet Rod Tube

TYPICAL PROPERTIES OF PEEK

	UNITS	ASTM TEST	PEEK	PEEK 30% GLASS-FILLED
Tensile strength	psi	D638	14,000	24,620
Flexural modulus	psi	D790	590,000	1,450,000
Izod impact (notched)	ft-lbs/in of notch	D256	1.6	1.84
Heat deflection temperature @ 264 psi	°F	D648	306	599
Maximum continuous service temperature in air	°F		480	482
Water absorption (immersion 24 hours)	%	D570	0.50	0.11
Coefficient of linear thermal expansion	in/in/°Fx10^{-5}	D696	2.6	1.2
Coefficient of friction (dynamic)			0.25	0.30

Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand.