



## PEEK (polyetheretherketone)

PEEK is a high performance semi-crystalline thermoplastic. PEEK's characteristics include high temperature performance, excellent wear properties, superior chemical resistance and outstanding toughness and strength. Currently Westlake is stocking PEEK in film, rod and select sizes of sheet. The following physical property information is based on typical values of the base PEEK resin.

**Applications Include:**

- Valve seats, pump gears, high purity seals
- Electrical connectors, wafer carriers
- Screws, impellers, gears and wear blades
- Laboratory and analytical equipment

**Advantages of PEEK:**

- High strength
- High purity
- High temperature
- Excellent wear resistance
- Broad solvent resistance
- FDA

**Manufacturing Capabilities:****PEEK****Rod:** 1/4" to 4" diameter**Sheet (Extruded):** 1/2" to 1 1/2" thick**Film:** .001" to .060" thick**Colors/Grades:**

Natural Buff (available in black, bearing grade, and carbon filled by request only)

\*In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

	Units	ASTM Test	Result
<b>Mechanical</b>			
Flexural Modulus	psi	D790	594,000
Flexural Strength	psi	D790	24,600
Hardness-Rockwell	—	D785	R126
Izod Impact Strength			
Notched	ft•lbs/in	D256	1.18
Un-Notched	ft•lbs/in	D256	No Break
Tensile Elongation			
@break	%	D638	50
@yield	%	D638	4.9
Tensile Modulus	psi	D638	520,000
Tensile Strength @yield	psi	D638	14,100
<b>Thermal</b>			
Coefficient of Thermal Expansion	in/in/°F	D696	2.6x10 <sup>-5</sup>
Continuous Use Temperature			
Mechanical	°F	UL746B	464
Electrical	°F	UL746B	500
Flammability Rating—UL94	—	—	V-0
Heat Deflection Temperature			
@264 psi	°F	D648	320
@66 psi	°F	D648	480
Limiting Oxygen Index	%	D2863	35
Melt Temperature	°F	D4591	644
<b>Electrical</b>			
Dielectric Constant @1kHz	—	D150	3.2
Dielectric Strength @1mil	V/mil	D149	5,240
<b>Other</b>			
Specific Gravity	—	D792	1.28
Water Absorption @24 hours	%	D570	0.50