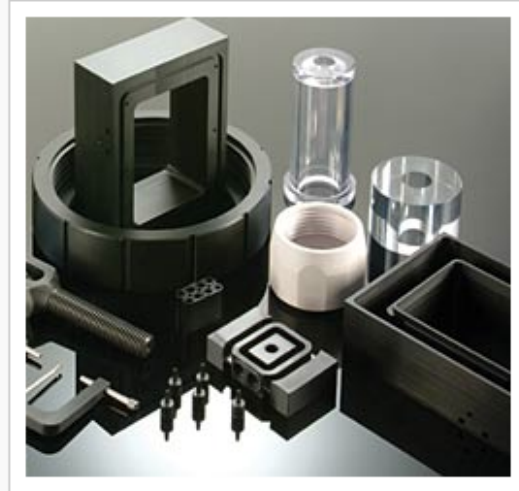


## TECAPEEK unfilled PEEK

TECAPEEK® stock shapes are made exclusively with Victrex PEEK polymer. TECAPEEK is a unique, semi-crystalline, high temperature engineering thermoplastic. It is an excellent material for a wide spectrum of applications where thermal, chemical, and combustion properties are critical to performance. Especially significant in this regard is TECAPEEK's ability to retain its flexural and tensile properties at very high temperatures in excess of 250°C (482°F). The addition of glass fiber or carbon fiber reinforcements enhances the mechanical and thermal properties of the basic TECAPEEK® material.



- **Excellent flexural, impact, and tensile characteristics**

- **Very high continuous working temperature**

- **Very high heat deflection temperature**

For unreinforced TECAPEEK™, the HDT @264 psi is 152°C (306°F). The addition of 30% reinforcement results in a dramatic increase to 315°C (600°F).

- **Exceptional chemical resistance**

TECAPEEK™ is insoluble in all common solvents.

- **A superior dielectric at high temperatures and frequencies**

- **Good radiation resistance**

TECAPEEK™ exhibits superior resistance to high doses of gamma radiation.

- **Outstanding wear and abrasion resistance**

- **Low smoke and toxic gas emissions**

- **Excellent hydrolysis resistance**

TECAPEEK™ has an excellent resistance to hydrolysis in boiling water and superheated steam (sterilization/autoclavability) at temperatures in excess of 250°C (482°F).

*TECAPEEK™s exceptional property profile enables it to be utilized in many of the most critical areas in general industry, as well as in the automotive, marine, nuclear, oil well, electronics, medical and aerospace fields.*

see properties on page 2

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Curbell Plastics is a proud supplier of Ensinger materials.

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	Properties	Condition	Value		Test Method	Comment
<b>Mechanical</b>	Modulus of elasticity (tensile test)	1% Sec, 73°F	650,000	psi	ASTM D 638	
	Tensile strength at yield	@ 73°F	16,000	psi	ASTM D 638	
	Elongation at yield	@ 73°F	4.9	%	ASTM D 638	
	Elongation at break	73°F	40	%	ASTM D 638	
	Flexural strength	@ 73°F	26,000	psi	ASTM D 790	
	Modulus of elasticity (flexural test)	@ 73°F	600,000	psi	ASTM D 790	
	Compression strength	@ 73°F 10% strain	17,500	psi	ASTM D 695	
	Notched impact strength (Izod)	@ 73°F	0.95	ft-lbs/in	ASTM D 256	
	Rockwell hardness	M Scale	99		ASTM D 785	
	Coefficient of friction	@ 68°F 1200 in/min, 155 lbs load	0.18		ASTM D 3702	(1) Injection molded specimen
<b>Thermal</b>	Melting temperature		633	°F	-	
	Deflection temperature	@ 264 psi	320	°F	ASTM D 648	(1) Injection molded specimen
	Service temperature	Long Term	480	°F	-	(2) Injection molded specimen
	Thermal expansion (CLTE)		2.6*10 <sup>-5</sup>	in/in/°F	ASTM D 696	(3) Injection molded specimen
	Thermal conductivity		1.7	BTU-in/hr-ft <sup>2</sup> -°F	ASTM C 177	(4) Injection molded specimen
<b>Electrical</b>	Specific surface resistivity		1.0*10 <sup>16</sup>	Ω/square	ASTM D 257	(1) Injection molded specimen
	Volume resistivity	@ 73°F	4.9*10 <sup>16</sup>	Ω*cm	ASTM D 149	(2) Injection molded specimen
	Dielectric strength	0.1" thick IEC 60243-1	630 V/mil	V/mil	ASTM D 257	(3) Injection molded specimen
<b>Other</b>	Moisture absorption	@ saturation, 73°F	0.5	%	D570	
	Moisture absorption	@ 24 hours, 73°F	0.5	%	ASTM D 570	
	Flammability (UL94)		V-0	%	-	(1) Injection molded specimen 3.0mm

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review.