

TECAPEEK ® ST - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEKEKK

(Polyetherketoneetherketoneketone)

Colour

black

Density

1.32 g/cm³

Main features

- → made exclusively from Victrex® resin
- → high heat deflection temperature
- → excellent mechanical properties
- → excellent chemical resistance
- → easy to machine
- → good dimensional stability
- → electrically insulating
- → high purity

Target Industries

- → oil and gas industry
- → semiconductor technology
- → chemical plant engineering
- → automotive industry
- → process engineering

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Mechanical properties	condition	value	unit	test method		comment		
Modulus of elasticity (tensile test)	(0.2 in/min)	760,000	psi	ASTM D 638				
Tensile strength at yield	0.2 in/min	19,400	psi	ASTM D 638				
Elongation at break (tensile test)	0.2 in/min	15	%	ASTM D 638				
Flexural strength	@ 73 °F	31,000	psi	ASTM D 790				
Modulus of elasticity (flexural test)	@ 73 °F	740,000	psi	ASTM D 790	_			
Compression strength	10% Strain	24,400	psi	ASTM D 695				
Compression strength	1% Strain	2,860	psi	ASTM D 695				
Compression modulus		445,000	psi	ASTM D 695				
Impact strength (Izod)	@ 73 °F	0.8	ft-lbs/in	ASTM D 256				
Rockwell hardness	R Scale	112		ASTM D 785				
Thermal properties	condition	value	unit	test method		comment		
Glass transition temperature		324	°F	DIN EN ISO 11357	1)	(1) Injection molded data		
Melting temperature		729	°F	DIN EN ISO 11357	2)	(2) Injection molded data (3) ISO 75-f Injection molded data (4) Data obtained from public source		
Deflection temperature	@264 psi	342	°F	ISO-R 75 Method A	3)			
Service temperature	Long Term	500	°F	-				
Service temperature	short term	572	°F	-	4)			
Thermal expansion (CLTE)	_	2.72	*10 ⁻⁵ in/in/°F	ASTM E 831				
Electrical properties	condition	value	unit	test method		comment		
surface resistivity		1.0*10 ¹⁴	Ω/square	-	1)	(1) Data obtained from public source		
volume resistance		>10 ¹⁵	Ω*cm	DIN IEC 60093				
Other properties	condition	value	unit	test method		comment		
Moisture absorption	@ saturation, 50% R.H.	0.05	%	ASTM D 570		(1) Data obtained from public source (2) Data obtained from public source		
Moisture absorption	@ 24 hrs., 73°F	0.02	%	ASTM D 570	1)			
Flammability (UL94)		V0		-	2)			

[→] TECAPEEK products are based on Victrex® PEEK polymer.

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