

TECAPEEK® ST

Polyetheretherketone
Ensinger Inc.

Message:

TECAPEEK® ST is a multipurpose semi-crystalline material from the polyaryletherketone family based on PEKEKK that features improved mechanical properties at higher temperatures. The benefits of TECAPEEK® ST compared to standard TECAPEEK® are that of a higher heat distortion temperature (HDT), better strength and stiffness of machined components and a higher flexural strength combined with a higher glass transition point. Target industries for TECAPEEK® ST are Oil and Gas, Semiconductor, Chemical and Automotive, crude petroleum extraction and drilling. Possible applications include turbocharger impellers, seal rings and other down hole parts, gears, and test sockets.

General Information			
Features	Semicrystallization		
	Good dimensional stability		
	High purity		
	Low hygroscopicity		
	Rigid, good		
	High strength		
	Insulation		
	Machinable		
	Good chemical resistance		
Uses	Gear		
	Seals		
	Application in Automobile Field		
	Oil/Gas Supplies		
Forms	Shapes		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm ³	ASTM D792
Water Absorption (Balance, 50)	0.050	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	4400	MPa	ASTM D638
Tensile Strength (Yield)	130	MPa	ASTM D638
Tensile Strain (Yield)	11	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	9.0	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	172	°C	ASTM D648
Glass Transition Temperature	162	°C	ASTM E1356
Peak Melting Temperature	387	°C	ASTM D3418
CLTE - Flow	4.9E-5	cm/cm/°C	ASTM E831

Service Temperature - Long Term	260	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	> 1.0E+15	ohms·cm	IEC 60093
Additional Information			
Data obtained from extruded shapes material.			
NOTE			
1.	1.0 mm/min		

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Recommended distributors for this material


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