TECAPEEK® TECAPEEK®

Polyetheretherketone

Ensinger Inc.

Message:

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.
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.

General Information	
Features	Semicrystallization
	Low smoke
	Anti-gamma radiation
	Impact resistance, high
	Good wear resistance
	Good chemical resistance
	Good wear resistance
	Heat resistance, high
	Hydrolysis resistance
Uses	Ship application
	Electrical/Electronic Applications
	Industrial application
	Aerospace applications
	Nuclear energy applications
	Application in Automobile Field
	Oil/Gas Supplies
	Medical/nursing supplies
Forms	Shapes

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm³	ASTM D792
Water Absorption			ASTM D570
23°C, 24 hr	0.50	%	ASTM D570
Saturated, 23°C	0.50	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	99		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus - 1% Secant (23°C)	4480	MPa	ASTM D638

Tensile Strength (Yield, 23°C)	110	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	4.9	%	ASTM D638
Fracture, 23°C	40	%	ASTM D638
Flexural Modulus (23°C)	4140	MPa	ASTM D790
Flexural Strength (23°C)	179	MPa	ASTM D790
Compressive Strength (23°C)	118	MPa	ASTM D695
Shear Strength (23°C)	52.4	MPa	ASTM D3846
Coefficient of Friction [1]	0.18		
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	51	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.35 mm)	160	°C	ASTM D648
Continuous Use Temperature	260	°C	
Melting Temperature	334	°C	
CLTE - Flow	4.7E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.25	W/m/K	ASTM C177
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity (23°C)	4.9E+16	ohms·cm	ASTM D257
Dielectric Strength	7.5	kV/mm	ASTM D149
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	V-0		UL 94
Additional Information	**Nominal Value**	**Unit**	
Limiting Pressure Velocity - 1200 in/min (20°C)	170000	psi·fpm	
Data obtained from extruded shapes material			
NOTE			
1.	@ 68°F, 1200 in/min, 155 lbs Load		

Recommended distributors for this material

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