

Ensinger Tecapeek® MT CF 30 Polyetheretherketone (PEEK)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Carbon Fiber Filled

Material Notes:

TECAPEEK™ high performance polymer, made from Victrex PEEK polymer, has successfully replaced glass, stainless steel and titanium in a growing range of medical applications. The material's exceptional combination of properties allow engineers and designers the ability to create cost-effective, innovative parts that exhibit outstanding wear, heat, electrical and chemical resistance. The TECAPEEK™ family is made up of materials for medical applications. TECAPEEK™ MT, unfilled pigmented medical grade PEEKTECAPEEK™ XP98, compression molded 30% carbon fiber filled PEEK (isotropic properties)TECAPEEK™ MT CF30, extruded 30% carbon fiber filled PEEKTECAPEEK™ Classic™, ISO 10993 certification by resin and extrusion lot of 30 days contactTECAPEEK™ Classix™ XRO-20 radio opaque grade with 20% BaSO4 addedThe TECAPEEK™ family of high performance plastics are high effective in the creation and manufacture of high quality medical instruments. Five separate grades, each with qualities to meet a wide range of requirements for the engineer and product designer. Information Provided by Ensinger Industries, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ensinger-Tecapeek-MT-CF-30-Polyetheretherketone-PEEK.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.41 g/cc	1.41 g/cc	ASTM D792
Density	1.44 g/cc	0.0520 lb/in ³	ASTM D792
Water Absorption at Saturation	0.060 % @Temperature 22.8 °C, Time 86400 sec	0.060 % @Temperature 73.0 °F, Time 24.0 hour	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	107	107	ASTM D785
Tensile Strength, Yield	186 MPa @Temperature 22.8 °C	27000 psi @Temperature 73.0 °F	ASTM D638
Elongation at Break	1.1 %	1.1 %	ASTM D638
Tensile Modulus	12.999 GPa @Temperature 22.8 °C	1885.4 ksi @Temperature 73.0 °F	1% Secant; ASTM D638
Flexural Strength	318 MPa @Temperature 22.8 °C	46100 psi @Temperature 73.0 °F	ASTM D790
Flexural Modulus	12.8 GPa @Temperature 22.8 °C	1850 ksi @Temperature 73.0 °F	ASTM D790
Compressive Strength	240 MPa	34800 psi	ASTM D695

Mechanical Properties	@Temperature 22.8 °C Metric	@Temperature 73.0 °F English	Comments
Shear Strength	97.2 MPa @Temperature 22.8 °C	14100 psi @Temperature 73.0 °F	Ultimate; ASTM D3846
Izod Impact, Notched	0.481 J/cm @Temperature 22.8 °C	0.900 ft-lb/in @Temperature 73.0 °F	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	14.4 µm/m-°C	8.00 µin/in-°F	ASTM D696
Thermal Conductivity	0.918 W/m-K	6.37 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	340 °C	644 °F	
Maximum Service Temperature, Air	260 °C	500 °F	continuous
Deflection Temperature at 1.8 MPa (264 psi)	316 °C	600 °F	ASTM D648
Flammability, UL94	V-0	V-0	

Descriptive Properties	Value	Comments
Limiting PV 2	385000	psi fpm, 68°F, 1200 in/min

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