

## Ensinger Tecapeek® PVX Polyetheretherketone (PEEK)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK)

### Material Notes:

TECAPEEK® PVX is an ultra high performance bearing material made from Victrex® PEEK polymer. TECAPEEK® PVX incorporates the properties of a premium polymeric matrix material with optimum levels of specific wear enhancing additives. This formulation raises the continuous use temperature by approximately 40°F and increases the limiting PV while maintaining excellent chemical resistance. When used as a non-metallic bearing, TECAPEEK® PVX offers a good range of tribological performance. It is designed to run at high loads and speeds, in hostile environments, either dry or lubricated. Continuous use temperature over 450°F. Flammability is UL94 V-O with a low limiting O2 index (-40%) and very low smoke generation. Can be used dry against hard or soft mating surfaces. Excellent weather resistance. Resistant to gamma radiation. Complies with specific provisions of ASTM D6262-98. Available in a wide range of sizes, extruded in rod and plate for subsequent machined parts. TECAPEEK® PVX great properties make it an ideal material for bearing surfaces in the most demanding applications and in the harshest conditions. Industrial, automotive, marine, nuclear, petroleum and aerospace industry applications realize great benefits from its use. Information Provided by Ensinger Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Ensinger-Tecapeek-PVX-Polyetheretherketone-PEEK.php](http://www.lookpolymers.com/polymer_Ensinger-Tecapeek-PVX-Polyetheretherketone-PEEK.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.48 g/cc	1.48 g/cc	ASTM D792
Density	1.48 g/cc	0.0535 lb/in <sup>3</sup>	ASTM D792
Water Absorption	<= 0.10 % @Temperature 22.8 °C, Time 86400 sec	<= 0.10 % @Temperature 73.0 °F, Time 24.0 hour	ASTM D570
Water Absorption at Saturation	0.10 %	0.10 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	
Tensile Strength, Yield	119 MPa	17300 psi	ASTM D638
Elongation at Break	2.5 %	2.5 %	ASTM D638
Tensile Modulus	8.96 GPa	1300 ksi	ASTM D638
Flexural Strength	207 MPa	30000 psi	ASTM D790
Flexural Modulus	8.27 GPa	1200 ksi	ASTM D790
	9.65 GPa @Temperature 22.8 °C	1400 ksi @Temperature 73.0 °F	Tangent; ASTM D790
Compressive Strength	152 MPa	22000 psi	ASTM D695

Mechanical Properties	Metric <sup>1/cm</sup>	English <sup>lb/in</sup>	Comments
	1.74 J/cm	3.25 ft-lb/in	ASTM D256
	@Temperature 22.8 °C	@Temperature 73.0 °F	
Coefficient of Friction, Dynamic	0.19	0.19	50 fpm
	@Pressure 0.276 MPa	@Pressure 40.0 psi	
Coefficient of Friction, Static	0.23	0.23	
	@Pressure 0.276 MPa	@Pressure 40.0 psi	
K Factor (Wear Factor)	1.25 - 1.5	1.25 - 1.5	in/min x 10 <sup>-3</sup>

Thermal Properties	Metric	English	Comments
CTE, linear	27.0 µm/m-°C	15.0 µin/in-°F	
Melting Point	334 °C	633 °F	
Maximum Service Temperature, Air	260 °C	500 °F	continuous
Deflection Temperature at 1.8 MPa (264 psi)	277 °C	530 °F	ASTM D648
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	1e+05 - 1.00e+8 ohm	1e+05 - 1.00e+8 ohm	ASTM D257

Descriptive Properties	Value	Comments
Base Material	PEEK	
Maximum PV	25000-30000	

## Contact Songhan Plastic Technology Co.,Ltd.

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