# TECAPEEK® PVX

### Polyetheretherketone

Ensinger Inc.

#### Message:

TECAPEEK® PVX is an ultra high performance bearing material that incorporates the properties of a premium polymetric 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 superb range of tribiological performance. It is designed to run at high loads and speeds, in hostile environments, either dry or lubricated. TECAPEEK™ PVX'S exceptional 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.

General Information			
Additive	Unspecified additive		
Features	Low smoke		
	Anti-gamma radiation		
	Good chemical resistance		
	Good wear resistance		
	Good weather resistance		
	Heat resistance, high		
Uses	Ship application		
	Industrial application		
	Aerospace applications		
	Nuclear energy applications		
	Application in Automobile Field		
	Oil/Gas Supplies		
Forms	Plate		
	Bar		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.48	g/cm³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	85		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, 23°C)	119	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	2.5	%	ASTM D638
Flexural Modulus - Tangent (23°C)	9650	MPa	ASTM D790
Flexural Strength (23°C)	207	MPa	ASTM D790
Compressive Strength (23°C)	152	MPa	ASTM D695
Coefficient of Friction <sup>1</sup>	0.19 - 0.21		ASTM D1894
Wear Rate	0.00125 - 0.00150	in/min	

Limiting Pressure Velocity	25000 - 30000		
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	170	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8			
MPa, Unannealed, 6.35 mm)	277	°C	ASTM D648
Continuous Use Temperature	260	°C	
Melting Temperature	334	°C	
CLTE - Flow	5.6E-6	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Electrical Surface Resistivity	Nominal Value 1.0E+5 - 1.0E+8	Unit ohms	Test Method ASTM D257
Electrical Surface Resistivity Volume Resistivity (23°C)	Nominal Value       1.0E+5 - 1.0E+8       1.4E+5	Unit ohms ohms·cm	Test Method ASTM D257 ASTM D257
Electrical Surface Resistivity Volume Resistivity (23°C) Flammability	Nominal Value1.0E+5 - 1.0E+81.4E+5Nominal Value	Unit ohms ohms·cm Unit	Test Method ASTM D257 ASTM D257 Test Method
Electrical Surface Resistivity Volume Resistivity (23°C) Flammability Flame Rating	Nominal Value1.0E+5 - 1.0E+81.4E+5Nominal ValueV-0	Unit ohms ohms·cm Unit	Test Method ASTM D257 ASTM D257 Test Method UL 94
ElectricalSurface ResistivityVolume Resistivity (23°C)FlammabilityFlame RatingAdditional Information	Nominal Value   1.0E+5 - 1.0E+8   1.4E+5   Nominal Value   V-0   Nominal Value	Unit ohms ohms·cm Unit	Test Method ASTM D257 ASTM D257 Test Method UL 94
ElectricalSurface ResistivityVolume Resistivity (23°C)FlammabilityFlame RatingAdditional InformationData based on injection molded samples.	Nominal Value1.0E+5 - 1.0E+81.4E+5Nominal ValueV-0Nominal Value	Unit ohms ohms·cm Unit	Test Method ASTM D257 ASTM D257 Test Method UL 94
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