



# TECAPEEK™ PVX

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 tribological performance. It is designed to run at high loads and speeds, in hostile environments, either dry or lubricated.

- **Excellent high temperature performance**  
Continuous use temperature over 450°F.
- **Flammability is UL94 V-O with a low limiting O<sup>2</sup> 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'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.*

# TYPICAL PROPERTY VALUES

	PROPERTIES	ASTM Test Method	Units	TECAPEEK™ PVX
<b>PHYSICAL</b>	Density	D792	lbs/in <sup>3</sup>	.0535
	Specific Gravity	D792		1.48
	Water Absorption, @24 hours, 73°F	D570	%	-
	@Equilibrium, 73°F	-	-	-
<b>MECHANICAL</b>	Tensile Strength @ Yield, 73°F	D638	psi	17,300
	Tensile Modulus, 1% Sec, 73°F	D638	psi	-
	Elongation, Yield, 73°F	D638	%	-
	Elongation, Ultimate, 73°F	D638	%	2.5
	Flexural Strength, 73°F	D790	psi	30,000
	Flexural Modulus, Tangent, 73°F	D790	psi	1,400,000
	Compressive Strength, 73°F	D695	psi	22,000
	Shear Strength, Ultimate, 73°F	D3846	psi	-
	Izod Impact, Notched, 73°F	D256	ft-lbs/in	3.25
	Rockwell Hardness M Scale	-		85
	Wear Rate	-	in/min x 10 <sup>-3</sup>	1.25-1.50
	Maximum PV	-	-	25,000-30,000
	Coefficient of Friction, @ 68°F	-	-	-
	1200 in/min, 155 lbs Load	D1894-95	μ	.19-.21
<b>THERMAL</b>	Deflection Temperature @ 264 psi, 1/4"	D648	°F	530
	Maximum Continuous Use Temperature	-	-	-
	Melting Point	-	°F	500
	Coefficient of Thermal Expansion	D696	in/in-°F	3.11 x 10 <sup>-6</sup>
	Thermal Conductivity	C177	Btu-in/hr-ft <sup>2</sup> -°F	-
	Flammability	UL94	-	-
	<b>ELECTRICAL</b>	Volume Resistivity, 73°F	D149	V/mil
Dielectric Strength		D257	ohm-cm	1.4 x 10 <sup>5</sup>
Surface Resistivity		D257	ohm/sq	10 <sup>5</sup> - 10 <sup>8</sup>

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#### MATERIAL AVAILABILITY

**Rods:** Diameters: 3/16" to 3-3/4"  
Length: 10'

**Plates:** .314 to 2.36 thicknesses are 19.7" x 39.5"

#### Shapes Specification (Typical)

ASTMD6262 S-PAEK 0144

*Profiles, tubes, and special sizes are custom-produced on request.*



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