

TECATRON® PVX - Stock Shapes (rods, plates, tubes)

Chemical Designation

PPS (Polyphenylsulfide)

Colour

black opaque

Density

1.5 g/cm³

Fillers

carbon fibres, PTFE, graphite

Main features

- very good bearing and wear properties
- very good chemical resistance
- good heat deflection temperature
- inherent flame resistance
- high dimensional stability
- high stiffness
- high creep resistance

Target Industries

- mechanical engineering
- aircraft and aerospace technology
- automotive industry
- conveyor technology
- precision engineering
- textile industry

<i>Mechanical properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Modulus of elasticity (tensile test)	1 mm/min	667,000	psi	DIN EN ISO 527-2	(1) Data obtained from public source
Tensile strength at yield	@ 73 °F	7,700	psi	ASTM D 638	(2) Data obtained from public source
Tensile strength at break	50 mm/min	7700	psi	DIN EN ISO 527-2	(3) Data obtained from public source
Elongation at break (tensile test)	50 mm/min	1.5	%	DIN EN ISO 527-2	
Flexural strength	2 mm/min	13,200	psi	DIN EN ISO 178	
Modulus of elasticity (flexural test)	2 mm/min	696,000	psi	DIN EN ISO 178	
Compression strength	2% strain 5 mm/min	5220	psi	EN ISO 604	
Compression strength	1% strain 5 mm/min	2760	psi	EN ISO 604	
Compression modulus	@ 73 °F	479,000	psi	ASTM D 695	2)
Impact strength (Izod)	@ 73 °F	6.7	ft-lbs/in	-	3)
<i>Thermal properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Melting temperature		538	°F	DIN 53765	
Service temperature	Intermittent	500	°F	-	
Service temperature	Long Term	446	°F	-	
Thermal expansion (CLTE)	72 - 140 F extrusion direction	2.8*10 ⁻⁵	in/in/°F	DIN EN ISO 11359-1;2	
Specific heat		0.215	BTU/lb-F°	ISO 22007-4:2008	
Thermal conductivity		4.03	%	ISO 22007-4:2008	
<i>Electrical properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
surface resistivity		10 ⁴ -10 ¹⁰	Ω/square	DIN EN 61340-2-3	
volume resistivity		10 ⁷ -10 ¹²	Ω*cm	DIN EN 61340-2-3	
<i>Other properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Moisture absorption	@ 24 hrs, 73 °F	0.02	%	ASTM D 570	(1) estimated
Flammability (UL94)		V0		-	1)

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