

Ensinger TECATRON™ PPS Polyphenylene sulfide (PPS)

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS)

Material Notes:

TECATRON PPS is a high performance thermoplastic that combines good mechanical properties with excellent thermal and chemical resistance properties. There is no known solvent that dissolves TECATRON PPS at temperatures below 392°F. Its low ionic impurities make it an excellent choice for applications where high purity is a concern. TECATRON GF40 is a glass reinforced material that offers extremely high strength along with excellent chemical resistance properties. TECATRON PVX is a bearing grade PPS that is suitable for high load applications. Information Provided by Ensinger Industries, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ensinger-TECATRON-PPS-Polyphenylene-sulfide-PPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.35 g/cc	1.35 g/cc	ASTM D792
Density	1.35 g/cc	0.0488 lb/in ³	ASTM D792
Water Absorption at Saturation	0.020 % @Temperature 22.8 °C, Time 86400 sec	0.020 % @Temperature 73.0 °F, Time 24.0 hour	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	104	104	ASTM D785
Tensile Strength, Yield	60.0 MPa @Temperature 22.8 °C	8700 psi @Temperature 73.0 °F	ASTM D638
Elongation at Break	4.0 % @Temperature 22.8 °C	4.0 % @Temperature 73.0 °F	ASTM D638
Tensile Modulus	3.31 GPa	480 ksi	ASTM D638
Flexural Strength	120 MPa @Temperature 22.8 °C	17400 psi @Temperature 73.0 °F	ASTM D790
Flexural Modulus	3.00 GPa @Temperature 22.8 °C	435 ksi @Temperature 73.0 °F	ASTM D790
Izod Impact, Notched	0.267 J/cm @Temperature 22.8 °C	0.500 ft-lb/in @Temperature 73.0 °F	ASTM D256
Coefficient of Friction, Dynamic	0.24 @Pressure 0.276 MPa	0.24 @Pressure 40.0 psi	50 fpm; ASTM D3702

Mechanical Properties	5.4e-8 Metric	5.4e-8 English	(in³/hr)x(1/PV), 50 fpm, Against Steel, ASTM D3702
	@Pressure 0.276 MPa	@Pressure 40.0 psi	

Thermal Properties	Metric	English	Comments
CTE, linear	72.0 µm/m-°C	40.0 µin/in-°F	ASTM D696
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft²-°F	
Melting Point	282 °C	540 °F	ASTM D2133
Maximum Service Temperature, Air	170 °C	338 °F	Long Term
Deflection Temperature at 0.46 MPa (66 psi)	204 °C	400 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	104 °C	220 °F	ASTM D648
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.0 @Frequency 60.0 Hz, Temperature 22.8 °C	3.0 @Frequency 60.0 Hz, Temperature 73.0 °F	50% RH; ASTM D150
Dissipation Factor	0.00010 @Frequency 60.0 Hz, Temperature 22.8 °C	0.00010 @Frequency 60.0 Hz, Temperature 73.0 °F	ASTM D150

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