

Victrex® PEEK 90GL60 Polyetheretherketone, 60% Glass Fibre Reinforced

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Glass Fiber Filled

Material Notes:

Product Description:High performance thermoplastic material, 60% glass fibre reinforced Polyetheretherketone (PEEK), semi crystalline, granules for injection moulding, standard flow, FDA food contact compliant, colour natural/beige. **Typical Application Areas:**Applications where higher strength in a static system is required. Low coefficient of thermal expansion. Chemically resistant to aggressive environments, suitable for sterilization for medical and food contact applications. **Information Provided by VICTREX®**

Order this product through the following link:

http://www.lookpolymers.com/polymer_Victrex-PEEK-90GL60-Polyetheretherketone-60-Glass-Fibre-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.83 g/cc	0.0661 lb/in ³	Crystalline; ISO 1183
Water Absorption at Saturation	0.40 % @Temperature 23.0 °C	0.40 % @Temperature 73.4 °F	Equilibrium; by immersion; ISO 62-1
Viscosity	525000 cP @Temperature 400 °C	525000 cP @Temperature 752 °F	melt; ISO 11443
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	360°C nozzle, 160°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	380°C nozzle, 190°C tool; ISO 294-4
Spiral Flow	10.0 cm @Thickness 1.00 mm	3.94 in @Thickness 0.0394 in	380°C nozzle, 190°C tool

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	87 @Temperature 23.0 °C	87 @Temperature 73.4 °F	ISO 868
Tensile Strength at Break	50.0 MPa @Temperature 275 °C	7250 psi @Temperature 527 °F	ISO 527
	90.0 MPa @Temperature 175 °C	13100 psi @Temperature 347 °F	ISO 527
	150 MPa @Temperature 125 °C	21800 psi @Temperature 257 °F	ISO 527
	240 MPa @Temperature 23.0 °C	34800 psi @Temperature 73.4 °F	ISO 527
	1.5 %	1.5 %	

Elongation at Break Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 527 Comments
Tensile Modulus	25.0 GPa @ Temperature 23.0 °C	3630 ksi @ Temperature 73.4 °F	ISO 527
Flexural Strength	360 MPa @ Temperature 23.0 °C	52200 psi @ Temperature 73.4 °F	ISO 178
Flexural Modulus	23.5 GPa @ Temperature 23.0 °C	3410 ksi @ Temperature 73.4 °F	ISO 178
Compressive Strength	65.0 MPa @ Temperature 200 °C	9430 psi @ Temperature 392 °F	ISO 604
	140 MPa @ Temperature 120 °C	20300 psi @ Temperature 248 °F	ISO 604
	230 MPa @ Temperature 23.0 °C	33400 psi @ Temperature 73.4 °F	ISO 604
Izod Impact, Notched (ISO)	11.5 kJ/m ² @ Temperature 23.0 °C	5.47 ft-lb/in ² @ Temperature 73.4 °F	ISO 180/A
Izod Impact, Unnotched (ISO)	50.0 kJ/m ² @ Temperature 23.0 °C	23.8 ft-lb/in ² @ Temperature 73.4 °F	ISO 180/U

Thermal Properties	Metric	English	Comments
CTE, linear	30.0 µm/m-°C @ Temperature <=143 °C	16.7 µin/in-°F @ Temperature <=289 °F	Average below Tg; ISO 11359
	70.0 µm/m-°C @ Temperature >=143 °C	38.9 µin/in-°F @ Temperature >=289 °F	Average above Tg; ISO 11359
CTE, linear, Parallel to Flow	13.0 µm/m-°C @ Temperature <=143 °C	7.22 µin/in-°F @ Temperature <=289 °F	Below Tg; ISO 11359
	15.0 µm/m-°C @ Temperature >=143 °C	8.33 µin/in-°F @ Temperature >=289 °F	Above Tg; ISO 11359
Thermal Conductivity	0.550 W/m-K @ Temperature 23.0 °C	3.82 BTU-in/hr-ft ² -°F @ Temperature 73.4 °F	ISO/CD 22007-4

Melting Point Thermal Properties	343 °C Metric	649 °F English	ISO 11357 Comments
Deflection Temperature at 1.8 MPa (264 psi)	343 °C	649 °F	ISO 75A-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
Glow Wire Test	960 °C @Thickness 2.00 mm	1760 °F @Thickness 0.0787 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Dielectric Constant	3.8 @Frequency 1000 Hz, Temperature 23.0 °C	3.8 @Frequency 1000 Hz, Temperature 73.4 °F	IEC 60250
Dielectric Strength	22.0 kV/mm @Thickness 2.50 mm	559 kV/in @Thickness 0.0984 in	IEC 60243-1
Dissipation Factor	0.0040 @Frequency 1.00e+6 Hz, Temperature 23.0 °C	0.0040 @Frequency 1.00e+6 Hz, Temperature 73.4 °F	IEC 60250
Comparative Tracking Index	150 V	150 V	IEC 60112

Processing Properties	Metric	English	Comments
Processing Temperature	<= 100 °C	<= 212 °F	Hopper Temperature
Nozzle Temperature	380 °C	716 °F	
Mold Temperature	180 - 210 °C	356 - 410 °F	
Drying Temperature	120 °C @Time 18000 sec	248 °F @Time 5.00 hour	
	150 °C @Time 10800 sec	302 °F @Time 3.00 hour	

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