Victrex® PEEK 450GL15 Polyetheretherketone, 15% Glass Fibre Reinforced

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

Material Notes:

Product Description:High performance thermoplastic material, 15% glass fibre reinforced Polyetheretherketone (PEEK), semi crystalline, granules for injection moulding and extrusion, standard flow, FDA food contact compliant, colour natural/beige.Typical Application Areas:Applications for higher strength in a static system. 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-450GL15-Polyetheretherketone-15-Glass-Fibre-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in³	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
	0.50 % @Temperature 100 °C	0.50 % @Temperature 212 °F	immersion; ISO 62-1
Viscosity	450000 cP @Temperature 400 °C	450000 cP @Temperature 752 °F	melt; ISO 11443
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	360°C nozzle, 160°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	380°C nozzle, 180°C tool; ISO 294-4
Spiral Flow	10.0 cm @Thickness 1.00 mm	3.94 in @Thickness 0.0394 in	380°C nozzle, 180°C tool

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	96 @Temperature 23.0 °C	96 @Temperature 73.4 °F	ISO 868
Tensile Strength at Break	25.0 MPa @Temperature 275 °C	3630 psi @Temperature 527 °F	ISO 527
	45.0 MPa @Temperature 175 °C	6530 psi @Temperature 347 °F	ISO 527
	80.0 MPa @Temperature 125 °C	11600 psi @Temperature 257 °F	ISO 527
	140 MPa	20300 psi	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 527
Elongation at Break	4.0 % @Temperature 23.0 °C	4.0 % @Temperature 73.4 °F	ISO 527
Tensile Modulus	7.50 GPa @Temperature 23.0 °C	1090 ksi @Temperature 73.4 °F	ISO 527
Flexural Strength	240 MPa @Temperature 23.0 °C	34800 psi @Temperature 73.4 °F	ISO 178
Flexural Modulus	7.20 GPa @Temperature 23.0 °C	1040 ksi @Temperature 73.4 °F	ISO 178
Compressive Strength	40.0 MPa @Temperature 200 °C	5800 psi @Temperature 392 °F	ISO 604
	130 MPa @Temperature 120 °C	18900 psi @Temperature 248 °F	ISO 604
	200 MPa @Temperature 23.0 °C	29000 psi @Temperature 73.4 °F	ISO 604
Izod Impact, Notched (ISO)	0.700 kJ/m² @Temperature 23.0 °C	0.333 ft-lb/in² @Temperature 73.4 °F	ISO 180/A
Izod Impact, Unnotched (ISO)	6.00 kJ/m² @Temperature 23.0 °C	2.86 ft-lb/in² @Temperature 73.4 °F	ISO 180/U
Charpy Impact Unnotched	6.00 J/cm² @Temperature 23.0 °C	28.6 ft-lb/in² @Temperature 73.4 °F	ISO 179/1U
Charpy Impact, Notched	0.550 J/cm² @Temperature 23.0 °C	2.62 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear	50.0 µm/m-°C @Temperature <=143 °C	27.8 µin/in-°F @Temperature <=289 °F	Average below Tg; ISO 11359
	125 µm/m-°C @Temperature >=143 °C	69.4 µin/in-°F @Temperature >=289 °F	Average above Tg; ISO 11359
CTE, linear, Parallel to Flow	25.0 µm/m-°C	13.9 µin/in-°F	Below Tg; ISO 11359

Thermal Properties	Metric	English	Comments
	30.0 µm/m-°C @Temperature >=143 °C	16.7 µin/in-°F @Temperature >=289 °F	Above Tg; ISO 11359
Thermal Conductivity	0.350 W/m-K	2.43 BTU-in/hr-ft²-°F	Along flow; ISO 22007-4
	0.300 W/m-K @Temperature 23.0 °C	2.08 BTU-in/hr-ft²-°F @Temperature 73.4 °F	Average; ISO/CD 22007-4
Melting Point	343 °C	649 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	298 °C	568 °F	ISO 75-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	150 °C	302 °F	Midpoint; ISO 11357

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Dielectric Constant	3.1 @Frequency 1000 Hz, Temperature 23.0 °C	3.1 @Frequency 1000 Hz, Temperature 73.4 °F	IEC 60250
Dielectric Strength	24.0 kV/mm @Thickness 5.00 mm	610 kV/in @Thickness 0.197 in	IEC 60243-1
Dissipation Factor	0.0050 @Frequency 1.00e+6 Hz, Temperature 23.0 °C	0.0050 @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	170 - 200 °C	338 - 392 °F	
Drying Temperature	120 °C @Time 18000 sec	248 °F @Time 5.00 hour	
	150 °C	302 °F	

Processing Properties	@Time 10800 sec Metric	@Time 3.00 hour English	Comments

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