

Victrex® PEEK 90GL30 Polyetheretherketone, 30% Glass Fiber Reinforced

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

Material Notes:

Product Description: High performance thermoplastic material, 30% glass fibre reinforced Polyetheretherketone (PEEK), semi crystalline, granules for injection moulding, very easy flow, FDA food contact compliant, colour natural/beige. Typical Application Areas: Complex geometries with thinner cross sections or longer flow lengths 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-90GL30-Polyetheretherketone-30-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.52 g/cc	0.0549 lb/in ³	Crystalline; ISO 1183
Water Absorption at Saturation	0.30 %	0.30 %	Equilibrium; by immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.45 %	0.45 %	immersion; ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	200000 cP	200000 cP	melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
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	0.0090 cm/cm	0.0090 in/in	370°C nozzle, 180°C tool; ISO 294-4
Spiral Flow	18.5 cm	7.28 in	370°C nozzle, 180°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	22.0 cm	8.66 in	400°C nozzle, 200°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	90	90	ISO 868
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength at Break	45.0 MPa	6530 psi	ISO 527
	@Temperature 275 °C	@Temperature 527 °F	
	60.0 MPa	8700 psi	ISO 527
	@Temperature 225 °C	@Temperature 437 °F	

Mechanical Properties	80.0 MPa Metric	11600 psi English	Comments ISO 527
	@Temperature 175 °C	@Temperature 347 °F	
	130 MPa	18900 psi	ISO 527
	@Temperature 125 °C	@Temperature 257 °F	
	195 MPa	28300 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.4 %	2.4 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	12.0 GPa	1740 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	75.0 MPa	10900 psi	ISO 178
	@Temperature 275 °C	@Temperature 527 °F	
	115 MPa	16700 psi	ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	230 MPa	33400 psi	ISO 178
	@Temperature 125 °C	@Temperature 257 °F	
	290 MPa	42100 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	11.5 GPa	1670 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	55.0 MPa	7980 psi	ISO 604
	@Temperature 250 °C	@Temperature 482 °F	
	160 MPa	23200 psi	ISO 604
	@Temperature 120 °C	@Temperature 248 °F	
	250 MPa	36300 psi	ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	10.0 kJ/m²	4.76 ft-lb/in²	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	45.0 kJ/m²	21.4 ft-lb/in²	ISO 180/U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.50 J/cm²	21.4 ft-lb/in²	

Charpy Impact Unnotched Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1U Comments
Charpy Impact, Notched	0.750 J/cm ² @Temperature 23.0 °C	3.57 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 µm/m-°C @Temperature <=143 °C	25.0 µin/in-°F @Temperature <=289 °F	Average below Tg; ISO 11359
	110 µm/m-°C @Temperature >=143 °C	61.1 µin/in-°F @Temperature >=289 °F	Average above Tg; ISO 11359
CTE, linear, Parallel to Flow	20.0 µm/m-°C @Temperature <=143 °C	11.1 µin/in-°F @Temperature <=289 °F	Below Tg; ISO 11359
	20.0 µm/m-°C @Temperature >=143 °C	11.1 µin/in-°F @Temperature >=289 °F	Above Tg; ISO 11359
Thermal Conductivity	0.300 W/m-K @Temperature 23.0 °C	2.08 BTU-in/hr-ft ² -°F @Temperature 73.4 °F	Average; ISO/CD 22007-4
	0.350 W/m-K @Temperature 23.0 °C	2.43 BTU-in/hr-ft ² -°F @Temperature 73.4 °F	Along flow; ISO 22007-4
Melting Point	343 °C	649 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	335 °C	635 °F	ISO 75A-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
Glow Wire Test	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Dielectric Constant	3.3	3.3	IEC 60250
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
Dielectric Strength	23.0 kV/mm	584 kV/in	IEC 60243-1
	@Thickness 2.50 mm	@Thickness 0.0984 in	

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@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	370 °C	698 °F	
Mold Temperature	170 - 200 °C	338 - 392 °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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