

Victrex® PEEK 150GL30 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, easy flow, FDA food contact compliant, colour natural/beige. Typical Application Areas: Complex geometries with thin cross sections or long flow lengths where higher strength in a static system is required. Low coefficient of thermal expansion. Chemically resistant to aggressive environments, suitable for sterilisation for medical and food contact applications. Information provided by Victrex.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Victrex-PEEK-150GL30-30-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.51 g/cc	0.0546 lb/in ³	ASTM D792
Water Absorption	0.11 %	0.11 %	24 hrs; ASTM D570
Water Absorption at Saturation	0.30 % @Temperature 23.0 °C	0.30 % @Temperature 73.4 °F	immersion; ISO 62-1
	0.45 % @Temperature 100 °C	0.45 % @Temperature 212 °F	immersion; ISO 62-1
Viscosity	275000 cP @Temperature 400 °C	275000 cP @Temperature 752 °F	melt; ISO 11443
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	
Melt Flow	16 g/10 min @Load 5.00 kg, Temperature 400 °C	16 g/10 min @Load 11.0 lb, Temperature 752 °F	
Spiral Flow	13.5 cm @Thickness 1.00 mm	5.31 in @Thickness 0.0394 in	recommended processing conditions

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	87	87	ISO 868
Tensile Strength at Break	45.0 MPa @Temperature 275 °C	6530 psi @Temperature 527 °F	ISO 527
	65.0 MPa	9430 psi	ISO 527

Mechanical Properties	@Temperature 225 °C Metric	@Temperature 437 °F English	Comments
	75.0 MPa	10900 psi	ISO 527
	@Temperature 175 °C	@Temperature 347 °F	
	125 MPa	18100 psi	ISO 527
	@Temperature 125 °C	@Temperature 257 °F	
	200 MPa	29000 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.7 %	2.7 %	ISO 527
Tensile Modulus	12.0 GPa	1740 ksi	ISO 527
Flexural Strength	75.0 MPa	10900 psi	ISO 178
	@Temperature 275 °C	@Temperature 527 °F	
	120 MPa	17400 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
Compressive Strength	55.0 MPa	7980 psi	ISO 604
	@Temperature 200 °C	@Temperature 392 °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)	10.5 kJ/m ²	5.00 ft-lb/in ²	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	60.0 kJ/m ²	28.6 ft-lb/in ²	ISO 180/U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.750 J/cm ²	3.57 ft-lb/in ²	

Charpy Impact, Notched Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eA Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	20.0 µm/m-°C	11.1 µin/in-°F	ISO 11359
	@Temperature >=143 °C	@Temperature >=289 °F	
	20.0 µm/m-°C	11.1 µin/in-°F	ISO 11359
	@Temperature <=143 °C	@Temperature <=289 °F	
	45.0 µm/m-°C	25.0 µin/in-°F	ISO 11359
	@Temperature <=143 °C	@Temperature <=289 °F	
	110 µm/m-°C	61.1 µin/in-°F	ISO 11359
	@Temperature >=143 °C	@Temperature >=289 °F	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft ² -°F	Average; ISO 22007-4
	0.350 W/m-K	2.43 BTU-in/hr-ft ² -°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 75-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	147 °C	297 °F	Midpoint; ISO 11357
UL RTI, Electrical	240 °C	464 °F	UL 746B
UL RTI, Mechanical with Impact	220 °C	428 °F	UL 746B
UL RTI, Mechanical without Impact	240 °C	464 °F	UL 746B
Glow Wire Test	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 50.8 mm	@Thickness 2.00 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	
Dielectric Constant	3.3	3.3	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	3.3	3.3	

Electrical Properties	Metric	English	Comments
Dissipation Factor	0.0040	0.0040	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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	
Dry Time	3.00 hour	3.00 hour	
	@Temperature 150 °C	@Temperature 302 °F	
	5.00 hour	5.00 hour	
	@Temperature 120 °C	@Temperature 248 °F	

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