

Victrex® PEEK -HT™ 22GL30 Polyetherketone, 30% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polyketone

Material Notes:

Product Description:High performance thermoplastic material, 30% glass fibre reinforced PolyEtherKetone (PEK), semi crystalline, granules for injection moulding, standard flow, FDA food contact compliant, colour natural/beige. **Typical Application Areas:**Higher temperature 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-HT-22GL30-Polyetherketone-30-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.53 g/cc	0.0553 lb/in ³	Crystalline; ISO 1183
Water Absorption at Saturation	0.50 %	0.50 %	Equilibrium; by immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.60 %	0.60 %	ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	450000 cP	450000 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	395°C nozzle, 200°C tool; ISO 294-4
Spiral Flow	10.5 cm	4.13 in	395°C nozzle, 200°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	88	88	ISO 868
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength at Break	55.0 MPa	7980 psi	ISO 527
	@Temperature 275 °C	@Temperature 527 °F	
	65.0 MPa	9430 psi	ISO 527
	@Temperature 225 °C	@Temperature 437 °F	
	75.0 MPa	10900 psi	ISO 527
	@Temperature 175 °C	@Temperature 347 °F	
	125 MPa	18100 psi	

Mechanical Properties	Metric @ Temperature 125 °C	English @ Temperature 257 °F	ISO 527 Comments
	200 MPa	29000 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.9 %	2.9 %	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	85.0 MPa	12300 psi	ISO 178
	@Temperature 275 °C	@Temperature 527 °F	
	120 MPa	17400 psi	ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	210 MPa	30500 psi	ISO 178
	@Temperature 123 °C	@Temperature 253 °F	
	290 MPa	42100 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	11.0 GPa	1600 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	50.0 MPa	7250 psi	ISO 604
	@Temperature 250 °C	@Temperature 482 °F	
	75.0 MPa	10900 psi	ISO 604
	@Temperature 200 °C	@Temperature 392 °F	
	180 MPa	26100 psi	ISO 604
	@Temperature 120 °C	@Temperature 248 °F	
	290 MPa	42100 psi	ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	70.0 kJ/m ²	33.3 ft-lb/in ²	ISO 180/U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	7.00 J/cm ²	33.3 ft-lb/in ²	ISO 179/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	0.900 J/cm²	4.24 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 µm/m-°C	25.0 µin/in-°F	Average below Tg; ISO 11359
	@Temperature <=152 °C	@Temperature <=306 °F	
	110 µm/m-°C	61.1 µin/in-°F	Average above Tg; ISO 11359
	@Temperature >=152 °C	@Temperature >=306 °F	
CTE, linear, Parallel to Flow	20.0 µm/m-°C	11.1 µin/in-°F	Below Tg; ISO 11359
	@Temperature <=152 °C	@Temperature <=306 °F	
	25.0 µm/m-°C	13.9 µin/in-°F	Above Tg; ISO 11359
	@Temperature >=152 °C	@Temperature >=306 °F	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft²-°F	Average; ISO/CD 22007-4
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.350 W/m-K	2.43 BTU-in/hr-ft²-°F	Along flow; ISO 22007-4
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Melting Point	373 °C	703 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	360 °C	680 °F	ISO 75-f
Glass Transition Temp, Tg	152 °C	306 °F	Onset; ISO 11357
	160 °C	320 °F	Midpoint; 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	3.2	3.2	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

Electrical Properties	@Thickness 2.00 mm Metric	@Thickness 0.0787 in English	Comments
	0.0050	0.0050	
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	395 °C	743 °F	
Mold Temperature	190 - 215 °C	374 - 419 °F	
Drying Temperature	120 °C	248 °F	
	@Time 18000 sec	@Time 5.00 hour	
	150 °C	302 °F	
	@Time 10800 sec	@Time 3.00 hour	

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