

Victrex® PEEK 450CA20 Polyetheretherketone, 20% Carbon Fibre Reinforced

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

Material Notes:

Product Description:High performance thermoplastic material, 20% carbon fibre reinforced Polyetheretherketone (PEEK), semi crystalline, granules for injection moulding and extrusion, standard flow, FDA food contact compliant, colour black. Typical Application

Areas:Applications for higher strength and stiffness in a static or dynamic system. Excellent wear resistance, low coefficient of friction, low coefficient of thermal expansion. Chemically resistant to aggressive environments. Information Provided by VICTREX®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Victrex-PEEK-450CA20-Polyetheretherketone-20-Carbon-Fibre-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	Crystalline; ISO 1183
Water Absorption at Saturation	0.35 %	0.35 %	Equilibrium; by immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.50 %	0.50 %	immersion; ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	525000 cP	525000 cP	melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	360°C nozzle, 160°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	395°C nozzle, 200°C tool; ISO 294-4
Spiral Flow	100 cm	39.4 in	395°C nozzle, 200°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	86	86	ISO 868
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength at Break	230 MPa	33400 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.1 %	2.1 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	19.5 GPa	2830 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	340 MPa	49300 psi	

Flexural Strength Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 178 Comments
Flexural Modulus	16.5 GPa @Temperature 23.0 °C	2390 ksi @Temperature 73.4 °F	ISO 178
Izod Impact, Notched (ISO)	9.50 kJ/m ² @Temperature 23.0 °C	4.52 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Izod Impact, Unnotched (ISO)	40.0 kJ/m ² @Temperature 23.0 °C	19.0 ft-lb/in ² @Temperature 73.4 °F	ISO 180/U

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	8.00 µm/m-°C @Temperature <=143 °C	4.44 µin/in-°F @Temperature <=289 °F	Below Tg; ISO 11359
	8.00 µm/m-°C @Temperature >=143 °C	4.44 µin/in-°F @Temperature >=289 °F	Above Tg; ISO 11359
Melting Point	343 °C	649 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	325 °C	617 °F	ISO 75-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	150 °C	302 °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+7 ohm-cm	1.00e+7 ohm-cm	1V; IEC 60093

Processing Properties	Metric	English	Comments
Processing Temperature	<= 100 °C	<= 212 °F	Hopper Temperature

Processing Properties	Metric	English	Comments
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	

Descriptive Properties	Value	Comments
Toxicity Index	0.05	NES 713; CO content
	0.12	NES 713; CO ₂ content
	0.17	NES 713; Total gases

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