

Victrex® PEEK 150FC30 Easy Flow

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

Material Notes:

Product Description: High performance thermoplastic material, 30% reinforced with carbon fibre / graphite / PTFE PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding, easy flow, FDA food contact compliant, colour black. **Typical Application Areas:** Tribological applications with thin cross sections or long flow lengths for high strength. Excellent wear resistance, very 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-150FC30-Easy-Flow.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	ASTM D792
Water Absorption at Saturation	0.30 %	0.30 %	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	275000 cP	275000 cP	Melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	380°C nozzle, 180°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	380°C nozzle, 180°C tool; ISO 294-4
Spiral Flow	13.0 cm	5.12 in	380°C nozzle, 180°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	83	83	ISO 868
Tensile Strength at Break	35.0 MPa	5080 psi	ISO 527
	@Temperature 275 °C	@Temperature 527 °F	
	50.0 MPa	7250 psi	ISO 527
	@Temperature 225 °C	@Temperature 437 °F	
	65.0 MPa	9430 psi	ISO 527
	@Temperature 175 °C	@Temperature 347 °F	
	100 MPa	14500 psi	ISO 527
	@Temperature 125 °C	@Temperature 257 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 527
Elongation at Break	2.0 %	2.0 %	ISO 527
Flexural Strength	45.0 MPa	6530 psi	ISO 178
	@Temperature 275 °C	@Temperature 527 °F	
	80.0 MPa	11600 psi	ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	160 MPa	23200 psi	ISO 178
	@Temperature 125 °C	@Temperature 257 °F	
	230 MPa	33400 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	12.0 GPa	1740 ksi	ISO 178
Compressive Strength	45.0 MPa	6530 psi	ISO 604
	@Temperature 200 °C	@Temperature 392 °F	
	110 MPa	16000 psi	ISO 604
	@Temperature 120 °C	@Temperature 248 °F	
	170 MPa	24700 psi	ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	5.50 kJ/m ²	2.62 ft-lb/in ²	ISO 180/A
Izod Impact, Unnotched (ISO)	30.0 kJ/m ²	14.3 ft-lb/in ²	ISO 180/U
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179/1U
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 µm/m-°C	25.0 µin/in-°F	Average below Tg; ISO 11359
	110 µm/m-°C	61.1 µin/in-°F	Average above Tg; ISO 11359
CTE, linear, Parallel to Flow	12.0 µm/m-°C	6.67 µin/in-°F	Below Tg; ISO 11359
	15.0 µm/m-°C	8.33 µin/in-°F	Above Tg; ISO 11359
Thermal Conductivity	0.850 W/m-K	5.90 BTU-in/hr-ft ² -°F	Average; ISO 22007-4
	1.70 W/m-K	11.8 BTU-in/hr-ft ² -°F	Along flow; ISO 22007-4

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	315 °C	599 °F	ISO 75A-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	147 °C	297 °F	Midpoint; ISO 11357
UL RTI, Mechanical with Impact	180 °C	356 °F	UL 746B
UL RTI, Mechanical without Impact	240 °C	464 °F	UL 746B
Oxygen Index	43 %	43 %	ISO 4289
	@Thickness 3.20 mm	@Thickness 0.126 in	
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	1e+05	1e+05	1V; IEC 60093

Processing Properties	Metric	English	Comments
Processing Temperature	<= 100 °C	<= 212 °F	Hopper Temperature
Nozzle Temperature	380 °C	716 °F	
Mold Temperature	180 °C	356 °F	
	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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