

Victrex® PEEK 450FC30 General Purpose

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 molding and extrusion, standard flow, FDA food contact compliant, color black. Typical

Application Areas: Tribological applications 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-450FC30-General-Purpose.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	ISO 1183
Water Absorption at Saturation	0.35 %	0.35 %	immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.35 %	0.35 %	immersion; ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	550000 cP	550000 cP	melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	385°C nozzle, 200°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	385°C nozzle, 200°C tool; ISO 294-4
Spiral Flow	8.00 cm	3.15 in	385°C nozzle, 200°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	38.0 cm	15.0 in	385°C nozzle, 200°C tool
	@Thickness 3.00 mm	@Thickness 0.118 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	
	45.0 MPa	6530 psi	ISO 527
	@Temperature 225 °C	@Temperature 437 °F	
	55.0 MPa	7980 psi	ISO 527
	@Temperature 175 °C	@Temperature 347 °F	

Mechanical Properties	Metric (Pa)	English (psi)	Comments
	@Temperature 125 °C	@Temperature 257 °F	ISO 527
	150 MPa	21800 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.3 %	2.3 %	ISO 527
Tensile Modulus	13.0 GPa	1890 ksi	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	11.5 GPa	1670 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)	7.00 kJ/m ²	3.33 ft-lb/in ²	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	35.0 kJ/m ²	16.7 ft-lb/in ²	ISO 180/U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	3.50 J/cm ²	16.7 ft-lb/in ²	ISO 179/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	25.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average below Tg; ISO 11359
	@Temperature ≤ 143 °C	@Temperature ≤ 289 °F	
	115 $\mu\text{m}/\text{m}\cdot\text{°C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average above Tg; ISO 11359
	@Temperature ≥ 143 °C	@Temperature ≥ 289 °F	
CTE, linear, Parallel to Flow	15.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	8.33 $\mu\text{in}/\text{in}\cdot\text{°F}$	Below Tg; ISO 11359
	@Temperature ≤ 143 °C	@Temperature ≤ 289 °F	
	20.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	11.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	Above Tg; ISO 11359
	@Temperature ≥ 143 °C	@Temperature ≥ 289 °F	
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
Melting Point	343 °C	649 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	315 °C	599 °F	ISO 75-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	150 °C	302 °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
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+10 ohm-cm	1.00e+10 ohm-cm	IEC 60093

Processing Properties	Metric	English	Comments
Processing Temperature	≤ 100 °C	≤ 212 °F	Hopper Temperature
Nozzle Temperature	385 °C	725 °F	
Mold Temperature	170 - 200 °C	338 - 392 °F	

Processing Properties	3.00 hour Metric	3.00 hour English	Comments
	@Temperature 150 °C	@Temperature 302 °F	
	5.00 hour	5.00 hour	
	@Temperature 120 °C	@Temperature 248 °F	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China