

Victrex® PEEK 600G Polyetheretherketone (discontinued **)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Unreinforced

Material Notes:

Product Description: High performance thermoplastic material, unreinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding and extrusion, low viscosity, FDA food contact compliant

Typical Application Areas: Applications for higher strength and stiffness as well as high ductility. 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-600G-Polyetheretherketone-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.26 g/cc	0.0455 lb/in ³	Amorphous; ISO 1183
	1.30 g/cc	0.0470 lb/in ³	Crystalline; ISO 1183
Water Absorption	0.40 %	0.40 %	by immersion; ISO 62-1
	0.070 % @Time 86400 sec	0.070 % @Time 24.0 hour	3.2 mm thick Tensile bar; ISO 62-1
Viscosity	500000 cP	500000 cP	Melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
Linear Mold Shrinkage, Flow	0.010 cm/cm	0.010 in/in	390°C nozzle, 200°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	390°C nozzle, 200°C tool; ISO 294-4
Spiral Flow	850 cm	335 in	390°C nozzle, 200°C tool; Victrex
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	95.0 MPa	13800 psi	ISO 527
Elongation at Break	45 %	45 %	ISO 527
Tensile Modulus	3.70 GPa	537 ksi	ISO 527
Flexural Strength	12.0 MPa	1740 psi	Result based on 450G; ISO 178
	@Temperature 275 °C	@Temperature 527 °F	
	17.0 MPa	2470 psi	Result based on 450G; ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	80.0 MPa	11600 psi	Result based on 450G; ISO 178

Mechanical Properties	@Temperature 125 °C Metric	@Temperature 257 °F English	Comments
	155 MPa	22500 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	4.10 GPa	595 ksi	ISO 178
Compressive Strength	70.0 MPa	10200 psi	Result based on 450G; ISO 604
	@Temperature 120 °C	@Temperature 248 °F	
	120 MPa	17400 psi	Result based on 450G; ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	9.50 kJ/m ²	4.52 ft-lb/in ²	ISO 180/A
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180/U

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	35.0 µm/m-°C	19.4 µin/in-°F	Below Tg, Result based on 450G; ISO 11359
	150 µm/m-°C	83.3 µin/in-°F	Above Tg, Result based on 450G; ISO 11359
CTE, linear, Transverse to Flow	55.0 µm/m-°C	30.6 µin/in-°F	Average below Tg, Result based on 450G; ISO 11359
	140 µm/m-°C	77.8 µin/in-°F	Average above Tg, Result based on 450G; ISO 11359
Specific Heat Capacity	2.20 J/g-°C	0.526 BTU/lb-°F	DSC
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft ² -°F	ISO/CD 22007-4
Melting Point	343 °C	649 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	152 °C	306 °F	Result based on 450G; ISO 75-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+9 ohm-cm	1.00e+9 ohm-cm	Result based on 450G
	@Temperature 275 °C	@Temperature 527 °F	
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	Result based on 450G
	@Temperature 125 °C	@Temperature 257 °F	
	1.00e+16 ohm-cm	1.00e+16 ohm-cm	Result based on 450G
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Electrical Properties	Metric	English	Comments
Dielectric Constant	@Frequency 50000 Hz, Temperature 23.0 °C	@Frequency 50000 Hz, Temperature 73.4 °F	Result based on 450G
	4.5	4.5	
	@Frequency 50000 Hz, Temperature 200 °C	@Frequency 50000 Hz, Temperature 392 °F	Result based on 450G
Dielectric Strength	16.0 kV/mm @Thickness 2.50 mm	406 kV/in @Thickness 0.0984 in	Result based on 450G; IEC 60243-1
Dissipation Factor	0.0030 @Frequency 1.00e+6 Hz	0.0030 @Frequency 1.00e+6 Hz	Result based on 450G; IEC 60250
Comparative Tracking Index	150 V	150 V	Result based on 450G; IEC 60112

Processing Properties	Metric	English	Comments
Processing Temperature	<= 100 °C	<= 212 °F	Hopper Temperature
Nozzle Temperature	390 °C	734 °F	
Zone 1	370 °C	698 °F	
Zone 2	375 °C	707 °F	
Zone 3	380 °C	716 °F	
Zone 4	385 °C	725 °F	
Mold Temperature	190 - 220 °C	374 - 428 °F	
	<= 250 °C	<= 482 °F	
Dry Time	3 hour @Temperature 150 °C	3 hour @Temperature 302 °F	
	5 hour @Temperature 120 °C	5 hour @Temperature 248 °F	

Descriptive Properties	Value	Comments
Color	Natural/Beige	
Gate	> 1mm or 0.5 x part thickness	
Runner	Die/nozzle > 3mm, manifold > 3.5mm	

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