

Victrex® PEEK 150G / 151G Polyetheretherketone, Unreinforced

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

Material Notes:

Product Description:High performance thermoplastic material, unreinforced Polyetheretherketone (PEEK), semi crystalline, depth filtered granules for injection moulding, easy flow, FDA food contact compliant, colour natural/beige. **Typical Application Areas:**Complex geometries with thin cross sections or long flow lengths, for high strength and stiffness as well as good 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-150G-151G-Polyetheretherketone-Unreinforced.php

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/in ³	Crystalline; ISO 1183
Water Absorption at Saturation	0.40 %	0.40 %	Equilibrium; by immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.55 %	0.55 %	immersion; ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	140000 cP	140000 cP	melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
Linear Mold Shrinkage, Flow	0.010 cm/cm	0.010 in/in	360°C nozzle, 160°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	365°C nozzle, 160°C tool; ISO 294-4
Spiral Flow	220 cm	86.6 in	365°C nozzle, 160°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	250 cm	98.4 in	375°C nozzle, 180°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	300 cm	118 in	400°C nozzle, 200°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	ISO 868
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength, Yield	105 MPa	15200 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	30 %	30 %	

Elongation at Break Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 527 Comments
Tensile Modulus	4.10 GPa	595 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	13.5 MPa	1960 psi	ISO 178
	@Temperature 275 °C	@Temperature 527 °F	
	20.0 MPa	2900 psi	ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	90.0 MPa	13100 psi	ISO 178
	@Temperature 125 °C	@Temperature 257 °F	
	175 MPa	25400 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	130 MPa	18900 psi	ISO 178
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	3.90 GPa	566 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	80.0 MPa	11600 psi	ISO 604
	@Temperature 120 °C	@Temperature 248 °F	
	130 MPa	18900 psi	ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	0.500 kJ/m²	0.238 ft-lb/in²	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180/U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	NB	NB	ISO 180/U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.420 J/cm²	2.00 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	55.0 µm/m-°C	30.6 µin/in-°F	Average below Tg; ISO 11359
	@Temperature <=143 °C	@Temperature <=289 °F	

Thermal Properties	Metric 140 µm/m-°C	English 77.2 µin/in-°F	Comments
	@Temperature >= 143 °C	@Temperature >= 289 °F	Average above Tg; ISO 11359
CTE, linear, Parallel to Flow	50.0 µm/m-°C	27.8 µin/in-°F	Below Tg; ISO 11359
	@Temperature <= 143 °C	@Temperature <= 289 °F	
	120 µm/m-°C	66.7 µin/in-°F	Above Tg; ISO 11359
	@Temperature >= 143 °C	@Temperature >= 289 °F	
Thermal Conductivity	0.320 W/m-K	2.22 BTU-in/hr-ft²-°F	Along flow; ISO 22007-4
	0.290 W/m-K	2.01 BTU-in/hr-ft²-°F	Average; ISO/CD 22007-4
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Melting Point	343 °C	649 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	156 °C	313 °F	ISO 75A-f
	167 °C	333 °F	ISO 75A-f
	@Temperature 200 °C, Time 14400 sec	@Temperature 392 °F, Time 4.00 hour	
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	147 °C	297 °F	Midpoint; ISO 11357
UL RTI, Electrical	260 °C	500 °F	UL 746B
UL RTI, Mechanical with Impact	180 °C	356 °F	UL 746B
UL RTI, Mechanical without Impact	240 °C	464 °F	UL 746B
Oxygen Index	24 %	24 %	ISO 4239
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	35 %	35 %	ISO 4239
	@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	1.00e+9 ohm-cm	1.00e+9 ohm-cm	IEC 60093
	@Temperature 275 °C	@Temperature 527 °F	

Electrical Properties	Metric	English	Comments
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
	@Temperature 125 °C	@Temperature 257 °F	
	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Constant	3.1	3.1	IEC 60250
	@Frequency 50000 Hz, Temperature 23.0 °C	@Frequency 50000 Hz, Temperature 73.4 °F	
Dielectric Strength	23.0 kV/mm	584 kV/in	IEC 60243-1
	@Thickness 2.50 mm	@Thickness 0.0984 in	
Dissipation Factor	0.0040	0.0040	IEC 60250
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Comparative Tracking Index	150 V	150 V	IEC 60112

Processing Properties	Metric	English	Comments
Processing Temperature	<= 100 °C	<= 212 °F	Hopper Temperature
Nozzle Temperature	365 °C	689 °F	
Mold Temperature	170 - 200 °C	338 - 392 °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	

Descriptive Properties	Value	Comments
Toxicity Index	0.074	NES 713; CO content
	0.15	NES 713; CO ₂ content
	0.22	NES 713; Total gases

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