

Victrex® PEEK 150G903 Black Polyetheretherketone, Unreinforced

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, easy flow, FDA food contact compliant, colour black.**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-150G903-Black-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	0.45 %	0.45 %	Equilibrium; by immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.55 %	0.55 %	ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	130000 cP	130000 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	360°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	

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	
Elongation at Break	20 %	20 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	3.90 GPa	566 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	13.5 MPa	1960 psi	

Flexural Strength Mechanical Properties	Metric @ Temperature 275 °C	English @ Temperature 527 °F	ISO 178 Comments
	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	4.50 GPa	653 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)	0.450 kJ/m ²	0.214 ft-lb/in ²	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	

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	
	140 µm/m-°C	77.8 µin/in-°F	Average above Tg; ISO 11359
	@Temperature >=143 °C	@Temperature >=289 °F	
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 Properties	Metric	English	Comments
Thermal Heat Capacity	2.20 J/g-°C @Temperature 23.0 °C	0.526 BTU/lb-°F @Temperature 73.4 °F	
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft²-°F	Average; ISO 22007-4
	0.320 W/m-K @Temperature 23.0 °C	2.22 BTU-in/hr-ft²-°F @Temperature 73.4 °F	Along flow; ISO/CD 22007-4
Melting Point	343 °C	649 °F	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	156 °C	313 °F	ISO 75-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	147 °C	297 °F	Midpoint; ISO 11357
Oxygen Index	24 % @Thickness 0.400 mm	24 % @Thickness 0.0157 in	ISO 4239
	35 % @Thickness 3.20 mm	35 % @Thickness 0.126 in	ISO 4239
Glow Wire Test	960 °C @Thickness 2.00 mm	1760 °F @Thickness 0.0787 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+9 ohm-cm @Temperature 275 °C	1.00e+9 ohm-cm @Temperature 527 °F	IEC 60093
	1.00e+15 ohm-cm @Temperature 125 °C	1.00e+15 ohm-cm @Temperature 257 °F	IEC 60093
	1.00e+16 ohm-cm @Temperature 23.0 °C	1.00e+16 ohm-cm @Temperature 73.4 °F	IEC 60093
Dielectric Strength	24.0 kV/mm @Thickness 2.00 mm	610 kV/in @Thickness 0.0787 in	IEC 60243-1
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	

Processing Properties	Metric	English	Comments
Drying Temperature	@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; CO₂ content
	0.22	NES 713; Total gases

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