

Victrex® PEEK 90G 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 thinner cross sections or longer 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-90G-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	90000 cP	90000 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	24.5 cm	9.65 in	365°C nozzle, 160°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	28.0 cm	11.0 in	375°C nozzle, 180°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	33.0 cm	13.0 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	
	20 %	20 %	

Elongation at Break Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 527 Comments
Tensile Modulus	4.10 GPa @Temperature 23.0 °C	595 ksi @Temperature 73.4 °F	ISO 527
Flexural Strength	13.5 MPa @Temperature 275 °C	1960 psi @Temperature 527 °F	ISO 178
	20.0 MPa @Temperature 175 °C	2900 psi @Temperature 347 °F	ISO 178
	90.0 MPa @Temperature 125 °C	13100 psi @Temperature 257 °F	ISO 178
	175 MPa @Temperature 23.0 °C	25400 psi @Temperature 73.4 °F	ISO 178
	130 MPa @Strain 3.50 %, Temperature 23.0 °C	18900 psi @Strain 3.50 %, Temperature 73.4 °F	ISO 178
Flexural Modulus	3.90 GPa @Temperature 23.0 °C	566 ksi @Temperature 73.4 °F	ISO 178
Compressive Strength	80.0 MPa @Temperature 120 °C	11600 psi @Temperature 248 °F	ISO 604
	130 MPa @Temperature 23.0 °C	18900 psi @Temperature 73.4 °F	ISO 604
Izod Impact, Notched (ISO)	4.50 kJ/m² @Temperature 23.0 °C	2.14 ft-lb/in² @Temperature 73.4 °F	ISO 180/A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 180/U
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 180/U
Charpy Impact, Notched	0.450 J/cm² @Temperature 23.0 °C	2.14 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

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

Thermal Properties	°C Metric	°F English	Comments
	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 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	As molded; ISO 75A-f
	167 °C	333 °F	Annealed; 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
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	
	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	

Electrical Properties	Metric	English	Comments
Dielectric Constant	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	IEC 60250
Dielectric Strength	23.0 kV/mm @Thickness 2.50 mm	584 kV/in @Thickness 0.0984 in	IEC 60243-1
Dissipation Factor	0.0040 @Frequency 1.00e+6 Hz, Temperature 23.0 °C	0.0040 @Frequency 1.00e+6 Hz, Temperature 73.4 °F	IEC 60250
Comparative Tracking Index	150 V	150 V	IEC 60112

Processing Properties	Metric	English	Comments
Mold Temperature	170 - 200 °C	338 - 392 °F	
Drying Temperature	120 °C @Time 18000 sec	248 °F @Time 5.00 hour	
	150 °C @Time 10800 sec	302 °F @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

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