

## Victrex® PEEK 150GL30 Black Polyetheretherketone, 30% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Glass Fiber Filled

### Material Notes:

**Product Description:**High performance thermoplastic material, 30% glass fibre reinforced 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 where higher strength in a static system is required. Low coefficient of thermal expansion. 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-150GL30-Black-Polyetheretherketone-30-Glass-Fiber-Reinforced.php](http://www.lookpolymers.com/polymer_Victrex-PEEK-150GL30-Black-Polyetheretherketone-30-Glass-Fiber-Reinforced.php)

Physical Properties	Metric	English	Comments
Density	1.52 g/cc	0.0549 lb/in <sup>3</sup>	Crystalline; ISO 1183
Water Absorption at Saturation	0.30 %	0.30 %	Equilibrium; by immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.45 %	0.45 %	ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	275000 cP	275000 cP	melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	360°C nozzle, 160°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	380°C nozzle, 180°C tool; ISO 294-4
Spiral Flow	15.0 cm	5.91 in	380°C nozzle, 180°C tool
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	87	87	ISO 868
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength at Break	40.0 MPa	5800 psi	ISO 527
	@Temperature 275 °C	@Temperature 527 °F	
	60.0 MPa	8700 psi	ISO 527
	@Temperature 225 °C	@Temperature 437 °F	
	70.0 MPa	10200 psi	ISO 527

Mechanical Properties	@Temperature 175 °C Metric	@Temperature 347 °F English	Comments
	115 MPa	16700 psi	ISO 527
	@Temperature 125 °C	@Temperature 257 °F	
	190 MPa	27600 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.4 %	2.4 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	12.0 GPa	1740 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	40.0 MPa	5800 psi	ISO 178
	@Temperature 275 °C	@Temperature 527 °F	
	115 MPa	16700 psi	ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	220 MPa	31900 psi	ISO 178
	@Temperature 125 °C	@Temperature 257 °F	
	270 MPa	39200 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	11.5 GPa	1670 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	55.0 MPa	7980 psi	ISO 604
	@Temperature 200 °C	@Temperature 392 °F	
	160 MPa	23200 psi	ISO 604
	@Temperature 120 °C	@Temperature 248 °F	
	250 MPa	36300 psi	ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	8.50 kJ/m <sup>2</sup>	4.04 ft-lb/in <sup>2</sup>	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	50.0 kJ/m <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	ISO 180/U
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
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Thermal Properties	45.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ Metric	25.0 $\mu\text{in}/\text{in}\cdot\text{°F}$ English	Comments
CTE, linear	@Temperature $\leq 143$ $^{\circ}\text{C}$	@Temperature $\leq 289$ $^{\circ}\text{F}$	Average below Tg; ISO 11359
	110 $\mu\text{m}/\text{m}\cdot\text{°C}$	61.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average above Tg; ISO 11359
	@Temperature $\geq 143$ $^{\circ}\text{C}$	@Temperature $\geq 289$ $^{\circ}\text{F}$	
CTE, linear, Parallel to Flow	20.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	11.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	Below Tg; ISO 11359
	@Temperature $\leq 143$ $^{\circ}\text{C}$	@Temperature $\leq 289$ $^{\circ}\text{F}$	
	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 $\geq 143$ $^{\circ}\text{C}$	@Temperature $\geq 289$ $^{\circ}\text{F}$	
Specific Heat Capacity	1.70 J/g- $^{\circ}\text{C}$	0.406 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 23.0 $^{\circ}\text{C}$	@Temperature 73.4 $^{\circ}\text{F}$	
Thermal Conductivity	0.350 W/m-K	2.43 BTU-in/hr-ft <sup>2</sup> - $^{\circ}\text{F}$	Along Flow; ISO 22007-4
	0.300 W/m-K	2.08 BTU-in/hr-ft <sup>2</sup> - $^{\circ}\text{F}$	Average; ISO/CD 22007-4
	@Temperature 23.0 $^{\circ}\text{C}$	@Temperature 73.4 $^{\circ}\text{F}$	
Melting Point	343 $^{\circ}\text{C}$	649 $^{\circ}\text{F}$	ISO 11357
Deflection Temperature at 1.8 MPa (264 psi)	335 $^{\circ}\text{C}$	635 $^{\circ}\text{F}$	ISO 75-f
Glass Transition Temp, Tg	143 $^{\circ}\text{C}$	289 $^{\circ}\text{F}$	Onset; ISO 11357
	147 $^{\circ}\text{C}$	297 $^{\circ}\text{F}$	Midpoint; ISO 11357
UL RTI, Electrical	240 $^{\circ}\text{C}$	464 $^{\circ}\text{F}$	UL 746B
UL RTI, Mechanical with Impact	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	UL 746B
UL RTI, Mechanical without Impact	240 $^{\circ}\text{C}$	464 $^{\circ}\text{F}$	UL 746B
Glow Wire Test	960 $^{\circ}\text{C}$	1760 $^{\circ}\text{F}$	IEC 60695-2-12
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+15 ohm-cm	5.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.4	3.4	IEC 60250
	@Frequency 1000 Hz, Temperature 23.0 $^{\circ}\text{C}$	@Frequency 1000 Hz, Temperature 73.4 $^{\circ}\text{F}$	
	21.5 kV/mm	546 kV/in	

Dielectric Strength Electrical Properties	Metric @ Thickness 2.50 mm	English @ Thickness 0.0984 in	IEC 60243-1 Comments
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
Processing Temperature	<= 100 °C	<= 212 °F	Hopper Temperature
Nozzle Temperature	380 °C	716 °F	
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	

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