

## Victrex® PEEK 450GL30 Polyetheretherketone, 30% Glass Fiber, Black

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

### Material Notes:

**Product Description:** High performance thermoplastic material, 30% glass fiber reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding and extrusion, Standard viscosity, FDA food contact compliant  
**Typical Application Areas:** Applications for higher strength in a static system. 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-450GL30-Polyetheretherketone-30-Glass-Fiber-Black.php](http://www.lookpolymers.com/polymer_Victrex-PEEK-450GL30-Polyetheretherketone-30-Glass-Fiber-Black.php)

Physical Properties	Metric	English	Comments
Density	1.51 g/cc	0.0546 lb/in <sup>3</sup>	Crystalline; ISO 1183
Water Absorption at Saturation	0.30 %	0.30 %	immersion; ISO 62-1
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.45 %	0.45 %	immersion; ISO 62-1
	@Temperature 100 °C	@Temperature 212 °F	
Viscosity	550000 cP	550000 cP	Melt; ISO 11443
	@Temperature 400 °C	@Temperature 752 °F	
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	385°C nozzle, 190°C tool; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	385°C nozzle, 190°C tool; ISO 294-4
Spiral Flow	8.50 cm	3.35 in	385°C nozzle, 190°C tool; Victrex
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	41.0 cm	16.1 in	385°C nozzle, 190°C tool; Victrex
	@Thickness 3.00 mm	@Thickness 0.118 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	88	88	ISO 868
Tensile Strength at Break	35.0 MPa	5080 psi	Result based on 450GL30; ISO 527
	@Temperature 225 °C	@Temperature 437 °F	
	60.0 MPa	8700 psi	Result based on 450GL30; ISO 527
	@Temperature 175 °C	@Temperature 347 °F	
	120 MPa	17400 psi	Result based on 450GL30; ISO 527
	@Temperature 125 °C	@Temperature 257 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 527
Elongation at Break	2.4 %	2.4 %	ISO 527
Tensile Modulus	11.5 GPa	1670 ksi	ISO 527
Flexural Strength	50.0 MPa @Temperature 225 °C	7250 psi @Temperature 437 °F	Result based on 450GL30; ISO 178
	80.0 MPa @Temperature 175 °C	11600 psi @Temperature 347 °F	Result based on 450GL30; ISO 178
	190 MPa @Temperature 125 °C	27600 psi @Temperature 257 °F	Result based on 450GL30; ISO 178
	250 MPa @Temperature 23.0 °C	36300 psi @Temperature 73.4 °F	ISO 178
Flexural Modulus	11.0 GPa	1600 ksi	ISO 178
Compressive Strength	55.0 MPa @Temperature 200 °C	7980 psi @Temperature 392 °F	Result based on 450GL30; ISO 604
	160 MPa @Temperature 120 °C	23200 psi @Temperature 248 °F	Result based on 450GL30; ISO 604
	250 MPa @Temperature 23.0 °C	36300 psi @Temperature 73.4 °F	Result based on 450GL30; ISO 604
Izod Impact, Notched (ISO)	10.5 kJ/m <sup>2</sup>	5.00 ft-lb/in <sup>2</sup>	ISO 180/A
Izod Impact, Unnotched (ISO)	55.0 kJ/m <sup>2</sup>	26.2 ft-lb/in <sup>2</sup>	ISO 180/U

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	18.0 μm/m-°C	10.0 μin/in-°F	Below Tg, Result based on 450GL30; ISO 11359
	18.0 μm/m-°C	10.0 μin/in-°F	Above Tg, Result based on 450GL30; ISO 11359
CTE, linear, Transverse to Flow	45.0 μm/m-°C	25.0 μin/in-°F	Average below Tg, Result based on 450GL30; ISO 11359
	110 μm/m-°C	61.1 μin/in-°F	Average above Tg, Result based on 450GL30; ISO 11359
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft <sup>2</sup> -°F	Average; ISO/CD 22007-4
	0.350 W/m-K	2.43 BTU-in/hr-ft <sup>2</sup> -°F	Along flow; ISO 22007-4

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	328 °C	622 °F	ISO 75-f
Glass Transition Temp, Tg	143 °C	289 °F	Onset; ISO 11357
	150 °C	302 °F	Midpoint; ISO 11357
UL RTI, Electrical	240 °C	464 °F	UL 746B
UL RTI, Mechanical with Impact	240 °C	464 °F	UL 746B
UL RTI, Mechanical without Impact	220 °C	428 °F	UL 746B
Glow Wire Test	960 °C @Thickness 2.00 mm	1760 °F @Thickness 0.0787 in	Result based on 450GL30; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+15 ohm-cm	5.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.3 @Frequency 1000 Hz	3.3 @Frequency 1000 Hz	IEC 60093
Dielectric Strength	21.5 kV/mm @Thickness 2.50 mm	546 kV/in @Thickness 0.0984 in	Result based on 450GL30; IEC 60243-1
Dissipation Factor	0.0050 @Frequency 1.00e+6 Hz	0.0050 @Frequency 1.00e+6 Hz	Result based on 450GL30; 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	385 °C	725 °F	
Zone 1	360 °C	680 °F	
Zone 2	370 °C	698 °F	
Zone 3	375 °C	707 °F	
Zone 4	380 °C	716 °F	
Mold Temperature	180 - 200 °C	356 - 392 °F	
	<= 250 °C	<= 482 °F	

Processing Properties	Metric	English	Comments
Dry Time	@Temperature 150 °C	@Temperature 302 °F	
	5 hour	5 hour	
	@Temperature 120 °C	@Temperature 248 °F	

Descriptive Properties	Value	Comments
Color	Black	
Gate	> 2mm or 0.5 x part thickness	
Runner	Die/nozzle > 3mm, manifold > 3.5mm	

## Contact Songhan Plastic Technology Co.,Ltd.

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