

VICTREX® PEEK 450GL30 BLACK

Polyetheretherketone

Victrex plc

Message:

High performance thermoplastic material, 30% glass fibre reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding and extrusion, standard viscosity, FDA food contact compliant, colour black.

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.

General Information	
UL YellowCard	E161131-224307
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight
Features	Semicrystallization
	High strength
	Good disinfection
	Good chemical resistance
	Compliance of Food Exposure
Uses	Non-specific food applications
	Medical/nursing supplies
Agency Ratings	FDA Food Exposure, Not Rated
Appearance	Black
Forms	Particles
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Density ¹	1.51	g/cm ³	ISO 1183
Spiral Flow ²			Internal method
-- ³	8.50	cm	Internal method
-- ⁴	41.0	cm	Internal method
Molding Shrinkage ⁵			ISO 294-4
Vertical flow direction: 190°C	0.90	%	ISO 294-4
Flow direction: 190°C	0.30	%	ISO 294-4
Water Absorption			ISO 62
23°C, 24 hr, 3.20 mm	0.040	%	ISO 62
Balance, 23°C, 3.20mm, 50% RH	0.30	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 23°C)	88		ISO 868
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus (23°C)	11500	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Fracture, 23°C	170	MPa	ISO 527-2
Fracture, 125°C	120	MPa	ISO 527-2
Fracture, 175°C	60.0	MPa	ISO 527-2
Fracture, 225°C	35.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.5	%	ISO 527-2
Flexural Modulus (23°C)	11000	MPa	ISO 178
Flexural Stress			ISO 178
23°C	260	MPa	ISO 178
125°C	190	MPa	ISO 178
175°C	80.0	MPa	ISO 178
225°C	50.0	MPa	ISO 178
Compressive Stress			ISO 604
23°C	250	MPa	ISO 604
120°C	160	MPa	ISO 604
200°C	55.0	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	9.0	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	50	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	328	°C	ISO 75-2/A
Glass Transition Temperature	143	°C	ISO 11357-2
Melting Temperature	343	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: > 143°C	1.8E-5	cm/cm/°C	ISO 11359-2
Flow: < 143°C	1.8E-5	cm/cm/°C	ISO 11359-2
Lateral: < 143°C	4.5E-5	cm/cm/°C	ISO 11359-2
Lateral: > 143°C	1.1E-4	cm/cm/°C	ISO 11359-2
Specific Heat (23°C)	1700	J/kg/°C	DSC
Thermal Conductivity (23°C)	0.30	W/m/K	ISO 22007-4
RTI Elec	240	°C	UL 746
RTI Imp	220	°C	UL 746
RTI	240	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	5.0E+15	ohms · cm	IEC 60093
Dielectric Strength (2.00 mm)	22	kV/mm	IEC 60243-1
Dielectric Constant (23°C, 1 kHz)	3.30		IEC 60250
Dissipation Factor (23°C, 1 MHz)	5.0E-3		IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method

Glow Wire Flammability Index (2.00 mm)	960	°C	IEC 60695-2-12
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C)	560	Pa·s	ISO 11443
Injection	Nominal Value	Unit	
Drying Temperature	120 - 150	°C	
Drying Time	3.0 - 5.0	hr	
Hopper Temperature	< 100	°C	
Rear Temperature	360	°C	
Middle Temperature	370 - 375	°C	
Front Temperature	380	°C	
Nozzle Temperature	385	°C	
Mold Temperature	180 - 200	°C	
Injection instructions			
Runner: Die / nozzle >3mm, manifold >3.5mmGate: >2mm or 0.5 x part thickness			
NOTE			

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| 1. | Crystalline |
| 2. | Mold temperature: 190°C, melt temperature: 385°C |
| 3. | 1 mm |
| 4. | 3 mm |
| 5. | 385°C nozzle |

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