

VICTREX® PEEK 90GL60

Polyetheretherketone

Victrex plc

Message:

High performance thermoplastic material, 60% glass fibre reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding, standard flow, FDA food contact compliant, colour natural/beige.
Applications 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.

General Information			
UL YellowCard	E161131-531778		
Filler / Reinforcement	Glass fiber reinforced material, 60% filler by weight		
Features	Semicrystallization		
	High strength		
	Good disinfection		
	Good liquidity		
	Good chemical resistance		
	Compliance of Food Exposure		
Agency Ratings	FDA Food Exposure, Not Rated		
Appearance	Beige		
	Natural color		
Forms	Particles		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density ¹	1.83	g/cm ³	ISO 1183
Spiral Flow ²	10.0	cm	Internal method
Molding Shrinkage ³			ISO 294-4
Vertical flow direction: 190°C	0.60	%	ISO 294-4
Flow direction: 190°C, 3.00mm	0.30	%	ISO 294-4
Water Absorption			ISO 62
23°C, 24 hr, 3.20 mm	0.020	%	ISO 62
Balance, 23°C, 3.20mm, 50% RH	0.40	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 23°C)	87		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	25000	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Fracture, 23°C	230	MPa	ISO 527-2
Fracture, 125°C	145	MPa	ISO 527-2

Fracture, 175°C	90.0	MPa	ISO 527-2
Fracture, 225°C	70.0	MPa	ISO 527-2
Fracture, 275°C	50.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	1.5	%	ISO 527-2
Flexural Modulus (23°C)	24000	MPa	ISO 178
Flexural Stress (23°C)	350	MPa	ISO 178
Compressive Stress			ISO 604
23°C	230	MPa	ISO 604
120°C	140	MPa	ISO 604
200°C	65.0	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	11	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	45	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	343	°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	1.3E-5	cm/cm/°C	ISO 11359-2
Flow: > 143°C	1.5E-5	cm/cm/°C	ISO 11359-2
Lateral: < 143°C	3.0E-5	cm/cm/°C	ISO 11359-2
Lateral: > 143°C	7.0E-5	cm/cm/°C	ISO 11359-2
Specific Heat (23°C)	1700	J/kg/°C	DSC
Thermal Conductivity (23°C)	0.46	W/m/K	ISO 22007-4
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms · cm	IEC 60093
Dielectric Strength (2.50 mm)	22	kV/mm	IEC 60243-1
Dielectric Constant (23°C, 1 kHz)	3.80		IEC 60250
Dissipation Factor (23°C, 1 MHz)	4.0E-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)	500	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	365	°C	
Front Temperature	375	°C	

Nozzle Temperature	380	°C
Mold Temperature	180 - 210	°C
Injection instructions		
Runner: Die / nozzle >3mm, manifold >3.5mmGate: >2mm or 0.5 x part thickness		
NOTE		
1.	Crystalline	
2.	Mold temperature: 190°C, melt temperature: 380°C	
3.	380°C nozzle	

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