VICTREX™ PEEK POLYMERS 150GL15

General Information

Product Description

High performance thermoplastic material, 15% glass fibre reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding, very easy flow, FDA food contact compliant, colour natural/beige.

Complex geometries with thin cross sections or long flow lengths where good 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.

Material Properties

Physical	Nominal Value	Unit	Test Method
Density (Crystalline)	1.40	g/cm³	ISO 1183
Spiral Flow [1]	18.0	cm	Internal Method
Molding Shrinkage [2]			ISO 294-4
Across Flow	1.0	%	
Flow	0.40	%	
Water Absorption (Saturation, 23°C)	0.40	%	ISO 62
Water Absorption - Saturation (100°C)	0.50	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	7500	MPa	ISO 527-1
Tensile Stress (Break, 23°C)	135	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.4	%	ISO 527-2
Flexural Modulus (23°C)	7300	MPa	ISO 178
Flexural Stress (23°C)	215	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact Strength (23°C)	6.0	kJ/m²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	25	kJ/m²	ISO 180
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D, 23°C)	86		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ISO 75-2/Af
1.8 MPa, Unannealed	323	°C	
Glass Transition Temperature			ISO 11357-2
Onset	143	°C	
Midpoint	147	°C	
Melting Temperature	343	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : < 143°C	3.0E-5	cm/cm/°C	
Flow : > 143°C	3.0E-5	cm/cm/°C	
Transverse : < 143°C	5.5E-5	cm/cm/°C	
Transverse : > 143°C	1.2E-4	cm/cm/°C	
Thermal Conductivity			ISO 22007-4
23°C [3]	0.30	W/m/K	
23°C [4]	0.35	W/m/K	

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (23°C)	1.0E+16	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	23	kV/mm	IEC 60243-1
Comparative Tracking Index	150	V	IEC 60112
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Viscosity (400°C)	200	Pa·s	ISO 11443

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	120 to 150	°C
Drying Time	3.0 to 5.0	hr
Hopper Temperature	< 100	°C
Rear Temperature	355	°C
Middle Temperature	360 to 365	°C
Front Temperature	370	°C
Nozzle Temperature	375	°C
Mold Temperature	170 to 200	°C

Injection Notes

Runner: Die / nozzle >3mm, manifold >3.5mm

Gate: >2mm or 0.5 x part thickness

Notes

[1] Mold Temperature: 180°C, Melt Temperature: 375°C, 1.00 mm

[2] 375°C nozzle, 180°C tool

[3] Average

[4] Along flow

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