VICTREX™ PEEK POLYMERS 150GL20

General Information

Product Description

High performance thermoplastic material, 20% 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)	1.43	g/cm³	ISO 1183
Spiral Flow [1]	16.0	cm	Internal Method
Molding Shrinkage [2]			ISO 294-4
Across Flow	0.90	%	
Flow	0.30	%	
Water Absorption (Saturation, 23°C)	0.40	%	ISO 62
Water Absorption - Saturation (100°C)	0.45	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	9000	MPa	ISO 527-1
Tensile Stress			ISO 527-2
Break, -55°C	170	MPa	
Break, 23°C	160	MPa	
Break, 125°C	115	MPa	
Break, 175°C	70.0	MPa	
Break, 225°C	50.0	MPa	
Break, 275°C	40.0	MPa	
Tensile Strain (Break, 23°C)	2.4	%	ISO 527-2
Flexural Modulus (23°C)	8500	MPa	ISO 178
Flexural Stress			ISO 178
-55°C	270	MPa	
23°C	250	MPa	
125°C	190	MPa	
175°C	100	MPa	
275°C	60.0	MPa	
Compressive Stress			ISO 604
23°C	250	MPa	
120°C	160	MPa	
200°C	60.0	MPa	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	6.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	35	kJ/m²	ISO 179/1U
Notched Izod Impact Strength (23°C)	7.5	kJ/m²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	35	kJ/m²	ISO 180
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D, 23°C)	86		ISO 868

VICTREX™ PEEK POLYMERS 150GL20

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	2.5E-5	cm/cm/°C	
Flow : > 143°C	2.5E-5	cm/cm/°C	
Transverse : < 143°C	4.5E-5	cm/cm/°C	
Transverse : > 143°C	1.1E-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	

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
Dielectric Constant (23°C, 1 kHz)	3.20		IEC 60250
Dissipation Factor (23°C, 1 MHz)	4.0E-3		IEC 60250
Comparative Tracking Index	150	V	IEC 60112

Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C)	225	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	360	°C
Middle Temperature	365 to 370	°C
Front Temperature	375	°C
Nozzle Temperature	380	°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: 380°C, 1.00 mm

[2] 380°C nozzle, 180°C tool

[3] Average

[4] Along flow

Revision Date: 7/17/2023