VICTREX® PEEK 150GL20

Polyetheretherketone

Victrex plc

Message:

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.

General Information			
UL YellowCard	E161131-531779	E161131-101337133	
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
Features	Semicrystallization Good disinfection Good liquidity Good strength Good chemical resistance Compliance of Food Exposure		
Uses	Non-specific food applications Medical/nursing supplies		
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]	1.43	g/cm³	ISO 1183
Spiral Flow	16.0	cm	Internal method
Molding Shrinkage [2]			ISO 294-4
Vertical flow direction	0.90	%	ISO 294-4
Flow direction	0.30	%	ISO 294-4
Water Absorption			ISO 62
23°C, 24 hr, 3.20 mm	0.050	%	ISO 62
Saturated, 23°C, 3.20mm	0.40	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D, 23°C)	86		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	9000	MPa	ISO 527-2

Tensile Stress			ISO 527-2
Fracture, -55°C	170	MPa	ISO 527-2
Fracture, 23°C	150	MPa	ISO 527-2
Fracture, 125°C	115	MPa	ISO 527-2
Fracture, 175°C	70.0	MPa	ISO 527-2
Fracture, 225°C	50.0	MPa	ISO 527-2
Fracture, 275°C	40.0	MPa	ISO 527-2
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	ISO 178
23°C	240	MPa	ISO 178
125°C	190	MPa	ISO 178
175°C	100	MPa	ISO 178
275°C	60.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	6.0	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	35	kJ/m^2	ISO 179/1eU
Notched Izod Impact (23°C)	7.0	kJ/m^2	ISO 180/A
Unnotched Izod Impact Strength (23°C)	35	kJ/m^2	ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	323	°C	ISO 75-2/Af
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	2.5E-5	cm/cm/°C	ISO 11359-2
Flow: < 143°C	2.5E-5	cm/cm/°C	ISO 11359-2
Lateral: < 143°C	4.5E-5	cm/cm/°C	ISO 11359-2
Lateral: > 143°C	1.1E-3	cm/cm/°C	ISO 11359-2
Specific Heat (23°C)	1700	J/kg/°C	DSC
Thermal Conductivity (23°C)	0.30	W/m/K	Internal method
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric 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)	230	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 - 365	°C
Middle Temperature	370	°C
Front Temperature	375	°C
Nozzle Temperature	380	°C
Mold Temperature	170 - 200	°C

Injection instructions
Runner: Die / nozzle >3mm, manifold >3.5mmGate: >2mm or 0.5 x part thickness

NOTE	
1.	Crystalline
2.	380°C nozzle, 180°C tool

Recommended distributors for this material

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