VICTREX® PEEK 90GL30

Polyetheretherketone

Victrex plc

Message:

High performance thermoplastic material, 30% glass fibre reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding, very easy flow, FDA food contact compliant, colour natural/beige.
Complex geometries with thinner cross sections or longer flow lengths 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, 30% filler by weight		
Features	Semicrystallization High strength Good disinfection Good liquidity 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]	1.52	g/cm³	ISO 1183
Spiral Flow [2]			Internal method
-- [3]	18.5	cm	Internal method
-- [4]	22.0	cm	Internal method
Molding Shrinkage [5]			ISO 294-4
Vertical flow direction: 180°C	0.90	%	ISO 294-4
Flow direction: 180°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)	87		ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	12000	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Fracture, 23°C	190	MPa	ISO 527-2
Fracture, 125°C	130	MPa	ISO 527-2
Fracture, 175°C	80.0	MPa	ISO 527-2
Fracture, 225°C	60.0	MPa	ISO 527-2
Fracture, 275°C	45.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.3	%	ISO 527-2
Flexural Modulus (23°C)	12000	MPa	ISO 178
Flexural Stress			ISO 178
23°C	290	MPa	ISO 178
125°C	190	MPa	ISO 178
175°C	80.0	MPa	ISO 178
275°C	50.0	MPa	ISO 178
Compressive Stress			ISO 604
23°C	250	MPa	ISO 604
120°C	160	MPa	ISO 604
250°C	55.0	MPa	ISO 604
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	7.5	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	45	kJ/m^2	ISO 179/1U
Notched Izod Impact (23°C)	8.5	kJ/m^2	ISO 180/A
Unnotched Izod Impact Strength (23°C)	40	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	2.0E-5	cm/cm/°C	ISO 11359-2
Flow: < 143°C	2.0E-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
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 MHz)	3.30		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)	220	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	355	°C	
Middle Temperature	360	°C	
Front Temperature	365	°C	
Nozzle Temperature	370	°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.	1 mm
3.	Mold temperature: 180°C, melt temperature: 370°C
4.	Mold temperature: 200°C, melt temperature: 400°C
5.	370°C nozzle

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China