

VICTREX® HT™ 22GL30

Polyether Ketone

Victrex plc

Message:

High performance thermoplastic material, 30% glass fibre reinforced PolyEtherKetone (PEK), semi crystalline, granules for injection moulding, standard flow, colour natural/beige.

Higher temperature applications where higher strength in a static system is required. Low coefficient of thermal expansion. Chemically resistant to aggressive environments, suitable for sterilisation for medical and food contact applications.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Semicrystallization		
	High strength		
	Good disinfection		
	Good liquidity		
	Good chemical resistance		
	Good wear resistance		
	Heat resistance, high		
Uses	Compliance of Food Exposure		
	Non-specific food applications		
	High temperature application		
	Medical/nursing supplies		
Appearance	Natural color		
Forms	Particles		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density ¹	1.53	g/cm ³	ISO 1183
Spiral Flow	10.5	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	0.50	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	88		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	200	MPa	ISO 527-2
Fracture, 125°C	125	MPa	ISO 527-2
Fracture, 175°C	75.0	MPa	ISO 527-2
Fracture, 225°C	65.0	MPa	ISO 527-2
Fracture, 275°C	55.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.8	%	ISO 527-2
Flexural Modulus (23°C)	11000	MPa	ISO 178
Flexural Stress			ISO 178
23°C	300	MPa	ISO 178
125°C	210	MPa	ISO 178
175°C	120	MPa	ISO 178
275°C	85.0	MPa	ISO 178
Compressive Stress			ISO 604
23°C	290	MPa	ISO 604
120°C	180	MPa	ISO 604
200°C	75.0	MPa	ISO 604
250°C	50.0	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	9.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	70	kJ/m ²	ISO 179/1U
Notched Izod Impact (23°C)	11	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	70	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	360	°C	ISO 75-2/Ae
Glass Transition Temperature	152	°C	ISO 11357-2
Melting Temperature	373	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: < 152°C	2.0E-5	cm/cm/°C	ISO 11359-2
Flow: > 152°C	2.5E-5	cm/cm/°C	ISO 11359-2
Lateral: < 152°C	4.5E-5	cm/cm/°C	ISO 11359-2
Lateral: > 152°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 kHz)	3.20		IEC 60250
Dissipation Factor (23°C, 1 MHz)	5.0E-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	375	°C	
Middle Temperature	380 - 385	°C	
Front Temperature	390	°C	
Nozzle Temperature	395	°C	
Mold Temperature	190 - 215	°C	
Injection instructions			
Runner: Die / nozzle >3mm, manifold >3.5mmGate: >2mm or 0.5 x part thickness			
NOTE			
1.	Crystalline		
2.	395°C nozzle, 200°C tool		

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