

VICTREX® PEEK-HT™ G22

➤ **Product Description:**

High performance thermoplastic material, unreinforced PolyEtherKetone (PEK), semi crystalline, depth filtered granules for injection moulding, easy flow, FDA food contact compliant, colour natural/beige.

➤ **Typical Application Areas:**

Applications for high strength and stiffness as well as good ductility at higher temperatures. Chemically resistant to aggressive environments, suitable for sterilization for medical and food contact applications.

➤ **Material Properties**

	CONDITIONS	TEST METHOD	UNITS	TYPICAL VALUE
Mechanical Data				
Tensile Strength	Break, 23 °C	ISO 527	MPa	115
	Break, 150 °C			50
	Break, 250 °C			17
Tensile Elongation	Break, 23 °C	ISO 527	%	25
Tensile Modulus	23 °C	ISO 527	GPa	3.7
Flexural Strength	23 °C	ISO 178	MPa	185
Flexural Modulus	23 °C	ISO 178	GPa	4.2
Compressive Strength	23 °C	ISO 604	MPa	135
Izod Impact Strength	Notched, 23 °C	ISO 180/A	kJ m ⁻²	6.0
	Unnotched, 23 °C	ISO 180/U		n/b
Thermal Data				
Melting Point		ISO 3146	°C	373
Glass Transition (Tg)		ISO 3146	°C	163
Specific Heat Capacity	23 °C	DSC	kJ kg ⁻¹ °C ⁻¹	2.2
Coefficient of Thermal Expansion	Along flow below Tg	ISO 11359	ppm °C ⁻¹	45
	Average below Tg			55
	Along flow above Tg			75
	Average above Tg			130
Heat Deflection Temperature	1.8 MPa	ISO 75-f	°C	163
Thermal Conductivity	23 °C	ISO/CD 22007-4	W m ⁻¹ °C ⁻¹	0.29 *
Flow				
Melt Viscosity	400 °C	ISO 11443	Pa.s	220
Miscellaneous				
Density	Crystalline	ISO 1183	g cm ⁻³	1.30
	Amorphous			1.26
Shore D hardness	23 °C	ISO 868		87
Water Absorption (3.2mm thick Tensile bar) (by immersion)	24 h, 23 °C	ISO 62-1	%	0.07
	Equilibrium, 23 °C			0.6

Electrical Properties				
Comparative Tracking Index		IEC 112	V	150 *
Volume Resistivity	23 °C	IEC 93	Ωcm	10 ¹⁶
	125 °C			10 ¹⁵
	275 °C			10 ⁹

Fire Smoke Toxicity				
Flammability Rating		UL94	n/a	V-0 @ 1.5 mm
Glow Wire Test	2mm thickness	IEC 60695-2-12	°C	960 *
Limiting Oxygen Index	0.4mm thickness	ISO 4239	% O ₂	24 *
	3.2mm thickness			35 *
Toxicity Index	CO content	NES 713	n/a	0.074 *
	CO ₂ content			0.15 *
	Total gases			0.22 *

* Results based on 450G

Recommended Processing Conditions	
Drying Temperature / Time	150 °C / 3h or 120 °C / 5h
Temperature settings	375 / 380 / 390 / 395 °C (Nozzle)
Hopper Temperature	Not greater than 100 °C
Mould Temperature	190 °C - 215 °C (max 250 °C)
Mould Shrinkage	Along flow, 3 mm, 170 °C mould, 1.3% **
	Across flow, 3 mm, 170 °C mould, 1.5% **
Runner	Die / nozzle >3mm, manifold >3.5mm
Gate	>1mm or 0.5 x part thickness

** estimate based on similar grades

Detailed data available on our website www.victrex.com or upon request

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