

# VICTREX CT™ 100 GRA



## Product Description

High performance thermoplastic material, unreinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding and extrusion, FDA food contact compliant, colour natural.

## Typical Application Areas

Applications at very low temperatures. Wear and erosion resistant and chemically resistant to aggressive environments

MATERIAL PROPERTIES				
	CONDITIONS	TEST METHOD	UNITS	TYPICAL VALUE
<b>Mechanical Data</b>				
Tensile Strength	Yield, 23°C	ISO 527	MPa	95
	Break, -196°C			200
Tensile Elongation	Break, 23°C	ISO 527	%	70
	Break, -196°C			8
Flexural Strength	23°C	ISO 178	MPa	150
	-196°C			435
Flexural Modulus	23°C	ISO 178	GPa	3.5
	-196°C			5.4
Compressive Strength	23°C	ISO 604	MPa	120
	-196°C		MPa	305
<b>Thermal Data</b>				
Melting Point		ISO 11357	°C	343
Glass Transition (Tg)	Onset	ISO 11357	°C	143
Coefficient of Thermal Expansion	Along flow below Tg	ISO 11359	ppm K <sup>-1</sup>	45
	Average below Tg			65
Thermal Conductivity	Along flow, 23°C	ISO 22007-4	W m <sup>-1</sup> K <sup>-1</sup>	0.32
	Average, 23°C			0.29
<b>Flow</b>				
Melt Viscosity	400°C	ISO 11443	Pa.s	550
<b>Miscellaneous</b>				
Density	Crystalline	ISO 1183	g cm <sup>-3</sup>	1.30
Shore D hardness	23°C	ISO 868		84

Typical Processing Conditions					
Drying Temperature / Time	150°C / 3h or 120°C / 5h (residual moisture <0.02%)				
Temperature settings	375 / 380 / 385 / 390 / 395°C (Nozzle)				
Hopper Temperature	Not greater than 100°C				
Mould Temperature	170°C – 200°C (max 250°C)				
Runner	Die / nozzle >3mm, manifold >3.5mm				
Gate	>1mm or 0.5 x part thickness				
Mould Shrinkage + spiral flow					
Spiral Flow	395°C nozzle, 180°C tool	1mm thick section	Victrex	mm	190
		3mm thick section			630
	415°C nozzle, 180°C tool	3mm thick section			700
Mould Shrinkage	395°C nozzle, 180°C tool	Along flow	ISO 294-4	%	0.9
		Across flow			1.3

**Moulding Guidelines**  
 Best results are obtained by using slower injection speed and higher hold pressures than for 450G

**Important notes:**

- Processing conditions quoted in our datasheets are typical of those used in our processing laboratories
  - Data for mould shrinkage should be used for material comparison. Actual mould shrinkage values are highly dependent on part geometry, mould configuration, and processing conditions.
  - Mould shrinkage differs for along flow and across flow directions. "Along flow" direction is taken as the direction the molten material is travelling when it exits the gate and enters the mould.
  - Mould shrinkage is expressed as a percent change in dimension of a specimen in relation to mould dimensions.
- Data are generated in accordance with prevailing national, international and internal standards, and should be used for material comparison. Actual property values are highly dependent on part geometry, mould configuration and processing conditions. Properties may also differ for along flow and across flow directions.

Detailed data available on our website [www.victrex.com](http://www.victrex.com) or upon request.

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