

VICTREX™ AS110



Product Description

High performance thermoplastic material, reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding, easy flow, colour natural/beige.

Typical Application Areas

VICTREX™ AS110 is typically used in applications that operate across a wide temperature range and require a combination of strength and ductility, good creep resistance and chemical resistance in aggressive fluid environments. Less abrasive on low-hardened light alloys compared to stiffer wear grades.

MATERIAL PROPERTIES				
	CONDITIONS	TEST METHOD	UNITS	TYPICAL VALUE
Mechanical Data				
Tensile Strength	At break, 23°C	ISO 527	MPa	75
Tensile Modulus	23°C	ISO 527	GPa	4.7
Tensile Elongation	At break, 23°C	ISO 527	%	10
Flexural Strength	At break, 23°C	ISO 178	MPa	140
Flexural Modulus	23°C	ISO 178	GPa	4.7
Compressive Strength	23°C	ISO 604	MPa	130
Izod Impact Strength	Notched, 23°C	ISO 180/A	kJ m ⁻²	5.5
	Unnotched, 23°C	ISO 180/U	kJ m ⁻²	20
Thermal Data				
Melting Point		ISO 11357	°C	343
Glass Transition (Tg)	Onset	ISO 11357	°C	143
	Midpoint			147
Coefficient of Thermal Expansion	Along flow below Tg	ISO 11359	ppm K ⁻¹	45
	Average below Tg			50
	Along flow above Tg			120
	Average above Tg			120
Heat Deflection Temperature	1.8 MPa	ISO 75A-f	°C	155
Thermal Conductivity	Along flow, 23°C	ISO 22007-4	W m ⁻¹ K ⁻¹	0.30
	Average, 23°C			0.32
Flow				
Melt Viscosity	400°C	ISO 11443	Pa.s	225
Miscellaneous				
Density	Crystalline	ISO 1183	g cm ⁻³	1.41
Shore D Hardness	23°C	ISO 868		85

Typical Processing Conditions	
Drying Temperature / Time	150°C / 3h or 120°C / 5h (residual moisture <0.02%)
Temperature settings	360 / 360 / 365 / 370 / 375°C (Nozzle)
Hopper Temperature	Not greater than 100°C
Mould Temperature	170°C - 200°C
Runner	Die / nozzle >3mm, manifold >3.5mm
Gate	>2mm or 0.5 x part thickness

Mould Shrinkage and Spiral Flow					
Spiral Flow	375°C nozzle, 180°C tool	1mm thick section	Victrex	mm	160
Mould Shrinkage	375°C nozzle, 180°C tool	Along Flow	ISO 294-4	%	0.9
		Across Flow			1.1

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 or upon request.

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