

VICTREX™ PEEK POLYMER AS110

General Information

Product Description

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

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

Physical	Nominal Value	Unit	Test Method
Density (Crystalline)	1.41	g/cm ³	ISO 1183
Spiral Flow ¹	16.0	cm	Internal Method
Molding Shrinkage ²			ISO 294-4
Across Flow	1.1	%	
Flow	0.90	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	4700	MPa	ISO 527-1
Tensile Stress (Break, 23°C)	75.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	10	%	ISO 527-2
Flexural Modulus (23°C)	4700	MPa	ISO 178
Flexural Stress (23°C)	140	MPa	ISO 178
Compressive Stress (23°C)	130	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (23°C)	5.5	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	20.0	kJ/m ²	ISO 180
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 23°C)	85.0		ISO 868
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/Af
1.8 MPa, Unannealed	155	°C	
Glass Transition Temperature			ISO 11357-2
Onset	143	°C	
Midpoint	147	°C	
Melting Temperature	343	°C	ISO 11357-3
CLTE - Flow			ISO 11359-2
< 143°C	45	ppm/K	
> 143°C	120	ppm/K	
CLTE - Average			ISO 11359-2
< 143°C	50	ppm/K	
> 143°C	120	ppm/K	
Thermal Conductivity			ISO 22007-4
23°C ³	0.30	W/m/K	
23°C ⁴	0.32	W/m/K	

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Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C)	225	Pa·s	ISO 11443

Typical Processing Information

Injection	Nominal Value	Unit
Drying Temperature	120 to 150	°C
Drying Time	3.0 to 5.0	hr
Hopper Temperature	< 100	°C
Rear Temperature	360	°C
Middle Temperature	360 to 365	°C
Front Temperature	370	°C
Nozzle Temperature	375	°C
Mould Temperature	170 to 200	°C

Injection Notes

Runner: Die / nozzle >3mm, manifold >3.5mm
Gate: >2mm or 0.5 x part thickness

Notes

¹ Mould Temperature: 180°C, Melt Temperature: 375°C, 1.00 mm
² 375°C nozzle, 180°C tool
³ Along flow
⁴ Average