

VICTREX™ PEEK POLYMER ABV 300 GRA

General Information

Product Description

High performance thermoplastic material, reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding, colour black.

VICTREX ABV™ 300 is typically used in applications that operate across a wide temperature range and require a combination of strength and compressive creep resistance at lower stiffness compared to 30% reinforced carbon grades.

Material Properties

Physical	Nominal Value	Unit	Test Method
Density (Crystalline)	1.41	g/cm ³	ISO 1183
Water Absorption (Saturation, 23°C)	0.30	%	ISO 62
Water Absorption Saturation (100°C)	0.45	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	20000	MPa	ISO 527
Tensile Stress (Break, 23°C)	200	MPa	ISO 527
Tensile Strain (Break, 23°C)	2.3	%	ISO 527
Flexural Modulus			ISO 178
23°C	18000	MPa	
125°C	17000	MPa	
Flexural Stress			ISO 178
23°C	330	MPa	
125°C	220	MPa	
Compressive Stress			ISO 604
23°C	275	MPa	
120°C	175	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (23°C)	9.0	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	55.0	kJ/m ²	ISO 180
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 23°C)	87.5		ISO 868
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/Af
1.8 MPa, Unannealed	> 300	°C	
Glass Transition Temperature (Onset)	143	°C	ISO 11357-2
Melting Temperature	343	°C	ISO 11357-3
CLTE - Average			ISO 11359-2
< 143°C	6.0	ppm/K	
> 143°C	35	ppm/K	
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C)	575	Pa·s	ISO 11443

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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	390	°C
Middle Temperature	380 to 385	°C
Front Temperature	375	°C
Nozzle Temperature	395	°C
Mould Temperature	180 to 200	°C

Injection Notes

- Runner: Die / nozzle >3mm, manifold >3.5mm
- Gate: >2mm or 0.5 x part thickness
- Granules must be sufficiently dried to ensure that residual moisture < 0.02%.