

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)	1.9	%	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)	7.6	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

Typical Processing Information

Injection	Nominal Value	Unit
Drying Temperature	120 to 150	°C
Drying Time	3.0 to 5.0	hr

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Injection	Nominal Value	Unit
Suggested Max Moisture	0.020	%
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

Drying Temperature / Time: 150°C / 3h or 120°C / 5h (residual moisture <0.02%)

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%.

Important notes:

1) Processing conditions quoted in our datasheets are typical of those used in our processing laboratories.

2) 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.

Revision Date: March 2026

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