

VICTREX® PEEK 600G

Polyetheretherketone

Victrex plc

Message:

High performance thermoplastic material, unreinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding and extrusion, low flow, FDA food contact compliant, colour natural/beige.
Applications for higher strength and stiffness as well as high ductility. Chemically resistant to aggressive environments, suitable for sterilization for medical and food contact applications.

General Information			
Features	Semicrystallization		
	Rigidity, high		
	High strength		
	Good disinfection		
	Low liquidity		
	Good chemical resistance		
	Compliance of Food Exposure		
	ductility		
Uses	Non-specific food applications		
	Medical/nursing supplies		
Agency Ratings	FDA Food Exposure, Not Rated		
Appearance	Beige		
	Natural color		
Forms	Particles		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density			ISO 1183
-- ¹	1.26	g/cm ³	ISO 1183
-- ²	1.30	g/cm ³	ISO 1183
Spiral Flow	8.50	cm	Internal method
Molding Shrinkage ³			ISO 294-4
Vertical flow direction	1.3	%	ISO 294-4
Flow direction	1.0	%	ISO 294-4
Water Absorption			ISO 62
23°C, 24 hr, 3.20 mm	0.070	%	ISO 62
Balance, 23°C, 3.20mm, 50% RH	0.40	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	3700	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	95.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	45	%	ISO 527-2
Flexural Modulus (23°C)	4100	MPa	ISO 178
Flexural Stress			ISO 178
3.5% strain, 23°C	115	MPa	ISO 178
23°C ⁴	155	MPa	ISO 178
125°C	80.0	MPa	ISO 178
175°C	17.0	MPa	ISO 178
275°C	12.0	MPa	ISO 178
Compressive Stress			ISO 604
23°C	120	MPa	ISO 604
120°C	70.0	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	9.5	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	152	°C	ISO 75-2/Af
Glass Transition Temperature	143	°C	ISO 11357-2
Melting Temperature	343	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: < 143°C	3.5E-4	cm/cm/°C	ISO 11359-2
Flow: > 143°C	1.5E-3	cm/cm/°C	ISO 11359-2
Lateral: < 143°C	5.5E-4	cm/cm/°C	ISO 11359-2
Lateral: > 143°C	1.4E-3	cm/cm/°C	ISO 11359-2
Specific Heat (23°C)	2200	J/kg/°C	ASTM C351
Thermal Conductivity (23°C)	0.29	W/m/K	ISO 22007-4
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			IEC 60093
23°C	1.0E+16	ohms · cm	IEC 60093
125°C	1.0E+15	ohms · cm	IEC 60093
275°C	1.0E+9	ohms · cm	IEC 60093
Dielectric Strength (2.00 mm)	23	kV/mm	IEC 60243-1
Dielectric Constant			IEC 60250
23°C, 50 Hz	3.20		IEC 60250
200°C, 50 Hz	4.50		IEC 60250
Dissipation Factor (23°C, 1 MHz)	3.0E-3		IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C)	450	Pa · s	ISO 11443

Injection	Nominal Value	Unit
Drying Temperature	120 - 150	°C
Drying Time	3.0 - 5.0	hr
Hopper Temperature	< 100	°C
Rear Temperature	370	°C
Middle Temperature	375 - 380	°C
Front Temperature	385	°C
Nozzle Temperature	390	°C
Mold Temperature	190 - 220	°C

Injection instructions

Runner: Die / nozzle >3mm, manifold >3.5mmGate: >1mm or 0.5 x part thickness

NOTE

1. Amorphous
2. Crystalline
3. 390°C nozzle, 200°C tool
4. at Yield

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