

VICTREX HPG™ 240 GRA



Product Description

High performance thermoplastic material, reinforced PolyEtherEtherKetone (PEEK), semi crystalline, granules for injection moulding, low flow, colour black. Chemically resistant to aggressive environments

MATERIAL PROPERTIES				
	CONDITIONS	TEST METHOD	UNITS	TYPICAL VALUE
Mechanical Data				
Tensile Strength	At break, 23°C	ISO 527	MPa	240
	At break, 80°C			200
	At break, 120°C			150
	At break, 160°C			95
Tensile Modulus	23°C	ISO 527	GPa	25.5
	80°C			25.0
	120°C			24.5
	160°C			10.5
Tensile Elongation	At break, 23°C	ISO 527	%	1.7
	At break, 80°C			1.8
	At break, 120°C			2.2
	At break, 160°C			4.5
Flexural Strength	At break, 23°C	ISO 178	MPa	360
	At break, 80°C			310
	At break, 120°C			260
	At break, 160°C			160
Flexural Modulus	23°C	ISO 178	GPa	22.0
	80°C			21.5
	120°C			21.0
	160°C			8.5
Compressive Strength	23°C	ISO 604	MPa	280
	80°C			220
	120°C			180
	160°C			100
Compressive Modulus	23°C	ISO 604	GPa	23
	80°C			21
	120°C			20
	160°C			8
Charpy Impact Strength	Notched, 23°C	ISO 179/A	kJ m ⁻²	10.0
Thermal Data				
Melting Point		ISO 11357	°C	343
Glass Transition (Tg)	Onset	ISO 11357	°C	143
Flow				
Melt Viscosity	420°C	ISO 11443	Pa.s	800
Miscellaneous				
Density	Crystalline	ISO 1183	g cm ⁻³	1.40

Typical Processing Conditions	
Drying Temperature / Time	150°C / 3h or 120°C / 5h (residual moisture <0.02%)
Temperature settings	390 / 400 / 405 / 410 / 415°C (Nozzle)
Hopper Temperature	Not greater than 100°C
Mould Temperature	180°C - 210°C
Runner	Die / nozzle >3mm, manifold >3.5mm
Gate	>2mm or 0.5 x part thickness

Mould Shrinkage and Spiral Flow					
Spiral Flow	415°C nozzle, 200°C tool	1mm thick section	Victrex	mm	80
		3mm thick section			375
Mould Shrinkage	415°C nozzle, 200°C tool	Along Flow	ISO 294-4	%	0.1
		Across Flow			0.5

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.

World Headquarters

Victrex plc
 Hillhouse International
 Thornton Cleveleys, Lancashire
 FY5 4QD, United Kingdom
 TEL +44 (0)1253 897700
 FAX +44 (0)1253 897701
 MAIL victrexplc@victrex.com

Victrex plc and/or its group companies ("Victrex") believes that the information contained in this document reflects the typical characteristics of the product/s as at the date of publication. Use of the product is at the customer's risk. It is the customer's responsibility to thoroughly test the product in each specific application to determine its performance, efficacy, and safety for each end-use product, device or other application. Mention of a product is no guarantee of availability. Victrex reserves the right to modify products, data sheets, specifications and/or packaging. Victrex makes no warranties, express or implied (including, without limitation, any warranty of fitness for a particular purpose or of intellectual property non-infringement) and will not be liable for any loss or damage of any nature (however arising) in connection with customer's use or reliance on this information, except for any liability which cannot be excluded or limited by law. VICTREX™ and any other trademark indicated by ™ are trademarks of Victrex.