

# VICTREX DR™ 101

## General Information

### Product Description

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

### Typical Application Areas

Applications for higher strength in a static system. Low coefficient of thermal expansion. Chemically resistant to aggressive environments.

## Material Properties

Physical	Nominal Value	Unit	Test Method
Density (Crystalline)	1.56	g/cm <sup>3</sup>	ISO 1183
Spiral Flow <sup>1</sup>	12.0	cm	Internal Method
Molding Shrinkage <sup>2</sup>			ISO 294-4
Across Flow	0.50	%	
Flow	0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	20000	MPa	ISO 527
Tensile Stress (Break, 23°C)	220	MPa	ISO 527
Tensile Strain (Break, 23°C)	1.8	%	ISO 527
Flexural Modulus (23°C)	20000	MPa	ISO 178
Flexural Stress (23°C)	320	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (23°C)	10.0	kJ/m <sup>2</sup>	ISO 180/A
Unnotched Izod Impact Strength (23°C)	40.0	kJ/m <sup>2</sup>	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/Af
1.8 MPa, Unannealed	331	°C	
Glass Transition Temperature			ISO 11357-2
Onset	143	°C	
Midpoint	150	°C	
Melting Temperature	343	°C	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+13	ohms·cm	IEC 60093
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (400°C)	330	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
Suggested Max Moisture	0.020	%
Hopper Temperature	< 100	°C
Rear Temperature	375	°C
Middle Temperature	380 to 385	°C
Front Temperature	395	°C

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Injection	Nominal Value	Unit
Nozzle Temperature	390	°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

Important notes:

1) 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.

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](http://www.victrex.com) or upon request.

## Notes

<sup>1</sup> Mould Temperature: 190°C, Melt Temperature: 385°C, 1.00 mm

<sup>2</sup> 385°C nozzle, 190°C tool

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