

VICTREX ST™ POLYMER P45

General Information

Product Description

High performance thermoplastic material, unreinforced PolyEtherKetoneEtherKetoneKetone (PEKEKK), semi crystalline, coarse powder for extrusion compounding, low flow, colour natural.

Material Properties

Physical	Nominal Value	Unit	Test Method
Density (Crystalline)	1.30	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	4200	MPa	ISO 527-1
Tensile Stress (Yield, 23°C)	110	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	10	%	ISO 527-2
Flexural Modulus (23°C)	4000	MPa	ISO 178
Flexural Stress (23°C)	170	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (23°C)	5.0	kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (23°C)	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature			ISO 11357-2
Onset	162	°C	
Midpoint	169	°C	
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (420°C)	225	Pa·s	ISO 11443

Typical Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	150 to 180	°C
Drying Time	3.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Melt Temperature	410 to 420	°C

Extrusion Notes

Drying Temperature / Time: 180°C / 3h or 150°C / 6h (residual moisture <0.02%)

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 or upon request.

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Revision Date: March 2026

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