

# VICTREX HT™ POLYMER P45

## General Information

### Product Description

High performance thermoplastic material, unreinforced PolyEtherKetone (PEK), 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 <sup>3</sup> | ISO 1183    |
| Mechanical                            | Nominal Value | Unit              | Test Method |
| Tensile Modulus (23°C)                | 4200          | MPa               | ISO 527-1   |
| Tensile Stress (Yield, 23°C)          | 100           | MPa               | ISO 527-2   |
| Tensile Strain (Break, 23°C)          | 15            | %                 | ISO 527-2   |
| Flexural Modulus (23°C)               | 4200          | MPa               | ISO 178     |
| Flexural Stress (23°C)                | 170           | MPa               | ISO 178     |
| Impact                                | Nominal Value | Unit              | Test Method |
| Notched Izod Impact Strength (23°C)   | 6.5           | kJ/m <sup>2</sup> | 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                                 | 152           | °C                |             |
| Midpoint                              | 160           | °C                |             |
| Melting Temperature                   | 373           | °C                | ISO 11357-3 |
| Fill Analysis                         | Nominal Value | Unit              | Test Method |
| Melt Viscosity (400°C)                | 350           | Pa·s              | ISO 11443   |

## Typical Processing Information

| Extrusion              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 120 to 150    | °C   |
| Drying Time            | 3.0 to 5.0    | hr   |
| Suggested Max Moisture | 0.020         | %    |
| Melt Temperature       | 400 to 420    | °C   |

### Extrusion Notes

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

Important notes:

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

Detailed data available on our website [www.victrex.com](http://www.victrex.com) or upon request.

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