

# QUADRANT EPP PRODUCT DATA SHEET

## KETRON® PEEK-1000

May 1999

*Polyetheretherketone (PEEK)*

The physical properties of KETRON® PEEK-1000 make it an outstanding advanced material. It can be used for a wide variety of demanding applications, where excellent mechanical performance under extreme conditions is required.

- Excellent chemical resistance
- Excellent hydrolysis resistance
- High flammability rating
- Excellent dimensional stability
- Wide operating range (-60°C to +250°C)
- Excellent resistance against high energy radiation
- Excellent mechanical strength / stiffness
- Good electrical insulating properties

Common applications: Pump components; Valve seats; Bearings; Rollers; Gears; High temperature insulation; Components in boiling water or steam.

### Delivery Programme

Rod 500mm long  
Diameter (mm): 60 (Min) 200 (Max)

Rod 1m long  
Diameter (mm): 3 (Min) 200 (Max)

Rod 3m long  
Diameter (mm): 3 (Min) 60 (Max)

Plate 500mm, 1m & 3m long  
Widths (mm): 500 & 1000  
Thickness (mm): 5 (Min) 25 (Max)

Plate 500mm, 1m & 3m long  
Widths (mm): 300 & 615  
Thickness (mm): 30 (Min) 100 (Max)

### Distributor

**Gilbert Curry  
Industrial Plastics Co Ltd**

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### Technical Specification

Property	ISO Methods	Units	KETRON® PEEK-1000
Colour	-	-	Beige
Specific gravity	1183	g/cm <sup>3</sup>	1.31
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	0.20
Saturation in water (23°C)	-	%	0.45
Tensile strength* <sup>1</sup>	527	N/mm <sup>2</sup>	110
Tensile modulus of elasticity* <sup>1</sup>	527	N/mm <sup>2</sup>	4400
Elongation at break* <sup>1</sup>	527	%	20
Impact - Charpy* <sup>1</sup>	179/1eU	kJ/m <sup>2</sup>	no break
Impact - Charpy notched* <sup>1</sup>	179/1eA	kJ/m <sup>2</sup>	3.5
Hardness	Rockwell Shore D	- -	M105 -
Melt Point	-	°C	340
Max allowable service temp in air			
for short periods	-	°C	310
continuously for 20000hrs	-	°C	250
Linear thermal expansion coefficient	-	K <sup>-1</sup> x 10 <sup>-5</sup>	5.0
Thermal Conductivity	-	W/(K.m)	0.25
Flammability* <sup>2</sup> (3mm thickness)	-	-	V-0
Volume Resistivity* <sup>1</sup>	IEC93	Ohm.cm	10 <sup>16</sup>
Dielectric Strength* <sup>1</sup>	IEC243	kV/mm	24
Outside applications - UV resistance	-	-	A
Acids - Strong (pH < 3)	-	-	A
Alkalis - Strong (pH > 11)	-	-	A
Chlorinated Hydrocarbons	-	-	A
Hot Water	-	-	A

'A' - Acceptable service; 'B' - Limited service; 'C' - Unacceptable.

\*<sup>1</sup> Measured on dry test specimens (where applicable)

\*<sup>2</sup> Tests completed by Quadrant EPP, using UL test methods

Not all material sizes shown within the delivery programme section of this data sheet are available as standard. Please contact Quadrant Engineering Plastic Products UK for further details.

The data shown are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.