

# QUADRANT EPP PRODUCT DATA SHEET

May 1999

## KETRON® PEEK-GF30

*Polyetheretherketone GF30 (PEEK + 30% Glass)*

This 30% glass fibre reinforced grade offers higher stiffness and creep resistance than KETRON® PEEK-1000 and has much better dimensional stability. KETRON® PEEK GF-30 is very appropriate for structural parts carrying high static loads for long periods of time at elevated temperatures. Its suitability for sliding parts, however, is to be carefully examined as the glass fibres tend to abrade the mating surface.

- Excellent chemical resistance
- Excellent hydrolysis resistance
- High flammability rating
- Excellent dimensional stability
- Wide operating range (-20°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)	100 (Max)	
Rod 1m long			
Diameter(mm):	6 (Min)	100 (Max)	
Rod 3m long			
Diameter(mm):	6 (Min)	60 (Max)	
Plate 500mm, 1m & 3m long			
Width (mm):	525		
Thickness (mm):	5 (Min)	8 (Max)	
Plate 500mm & 1m long			
Widths (mm):	305 & 625		
Thickness (mm):	10 (Min)	60 (Max)	
Plate 3m long			
Widths (mm):	305 & 625		
Thickness (mm):	10 (Min)	25 (Max)	
Tube 1m & 3m long			
O.D. (mm):	50 (Min)	200 (Max)	
I.D. (mm):	30 (Min)	160 (Max)	

### Distributor

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### Technical Specification

Property	ISO Methods	Units	KETRON® PEEK-GF30
Colour	-	-	Brown-Grey
Specific gravity	1183	g/cm <sup>3</sup>	1.51
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	0.14
Saturation in water (23°C)	-	%	0.30
Tensile strength* <sup>1</sup>	527	N/mm <sup>2</sup>	90
Tensile modulus of elasticity* <sup>1</sup>	527	N/mm <sup>2</sup>	6300
Elongation at break* <sup>1</sup>	527	%	5
Impact - Charpy* <sup>1</sup>	179/1eU	kJ/m <sup>2</sup>	35
Impact - Charpy notched* <sup>1</sup>	179/1eA	kJ/m <sup>2</sup>	4
Hardness	Rockwell	-	M99
	Shore D	-	-
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>	3.0
Thermal Conductivity	-	W/(K.m)	0.43
Flammability* <sup>2</sup> (3mm thickness)	-	-	V-0
Volume Resistivity* <sup>1</sup>	IEC93	Ohm.cm	10 <sup>15</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.