

QUADRANT EPP PRODUCT DATA SHEET

KETRON® PEEK-HPV

May 1999

Bearing Grade Polyetheretherketone (PEEK+ Carbon / Graphite / PTFE)

The addition of carbon fibres, graphite and PTFE to virgin PEEK results in a 'Bearing Grade' KETRON® PEEK. Its excellent tribological properties (low friction, long wear and high Pressure-Velocity capabilities) make this grade especially suited for bearing and wear applications.

- Excellent chemical resistance
- Excellent hydrolysis resistance
- Inherent low flammability
- Outstanding dimensional stability
- Wide operating range (-30°C to +250°C)
- Excellent resistance against high energy radiation
- Excellent mechanical strength / stiffness
- Exceptional wear resistance

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-HPV
Colour	-	-	Black
Specific gravity	1183	g/cm ³	1.45
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	0.14
Saturation in water (23°C)	-	%	0.30
Tensile strength* ¹	527	N/mm ²	75
Tensile modulus of elasticity* ¹	527	N/mm ²	5900
Elongation at break* ¹	527	%	5
Impact - Charpy* ¹	179/1eU	kJ/m ²	25
Impact - Charpy notched* ¹	179/1eA	kJ/m ²	2.5
Hardness	Rockwell	-	M85
	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 ⁻¹ x 10 ⁻⁵	3.0
Thermal Conductivity	-	W/(K.m)	0.24
Flammability* ² (3mm thickness)	-	-	V-0
Volume Resistivity* ¹	IEC93	Ohm.cm	-
Dielectric Strength* ¹	IEC243	kV/mm	-
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.

*¹ Measured on dry test specimens (where applicable)

*² 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.