

DATASHEET

KETRON PEEK CA30

Ketron PEEK CA30 is a 30% carbon fibre reinforced grade that exhibits even higher stiffness, mechanical strength, and creep and wear resistance than Ketron PEEK GF30. With a significantly reduced thermal expansion, optimum load carrying capabilities, and high thermal conductivity rates, Ketron PEEK CA30 components are often favoured for their ability to extend part life and rapidly dissipate heat in bearing applications.

Applications

- Structural Parts
- Bushings
- Bearings
- Seals
- Pump Wear Rings

Availability

- Colour – Black
- Type – Sheets, Rods & Tubes
- Regularly produced in a wide variety of thicknesses

Typical Properties

General Properties	Method	Unit	Test Result
Physical Properties			
Colour	-	-	Black
Density	ISO 1183-1	g/cm ²	1.40
Water Absorption:			
- After 24h immersion in water of 23°C	ISO 62	mg	0.05
- At saturation in water of 23°C	-	%	0.35
Thermal Properties			
Melting Temperature (DSC, 10°C/min)	ISO 11357 – 1/-3	°C	340
Glass Transition Temperature (DSC, 10°C/min)	ISO 11357 – 1/-2	°C	-
Thermal Conductivity at 23°C	-	W/(K.m)	0.92
Coefficient of Linear Thermal Expansion:			
- Average value between 23 and 100°C	-	W/(K.m)	25
- Average value between 23 and 150°C	-	W/(K.m)	25
- Average value above 150°C	-	W/(K.m)	55
Temperature of Deflection Under Load:			
- Method A: 1.8 MPa	ISO 75-1/-2	°C	260
Max Allowable Service Temperature in Air:			
- Continuously: for 5,000 to 20,000h	-	°C	250

Minimum Service Temperature	-	°C	-20
Flammability:			
- According to UL94 (3/6mm thickness)	-	-	v-0
Mechanical Properties			
Tension Test:			
- Tensile Strength	ISO 527-1/-2	MPa	144
- Tensile Strain at Yield	ISO 527-1/-2	%	-
- Tensile Strain at Break	ISO 527-1/-2	%	3.5
- Tensile Modulus of Elasticity	ISO 527-1/-2	MPa	9200
Flexural Test:			
- Flexural Strength	ISO 178	MPa	220
- Flexural Modulus of Elasticity	ISO 178	MPa	-
Compression Test:			
- Compressive Stress @ 1/2/5% Nominal Strain	ISO 604	MPa	69/125/170
Charpy Impact Strength - Unnotched	ISO 179-1-1eU	kJ/m ²	50
Charpy Impact Strength - Notched	ISO 179-1-1eU	kJ/m ²	5
Rockwell Hardness	ISO 2039-2	-	102
Dynamic Coefficient of Friction	ISO 7148-2(15)	-	
Wear Rate	ISO 7148-2(15)	Um/km	2.00
Electrical Properties			
Electric Strength	EC 60243-1	kV/mm	-
Volume Resistivity	IEC 60093	Ohm.cm	-
Surface Resistivity	IEC 60093	Ohm	10E4 – 10E6
Relative Permittivity – at 1MHz	IEC 60250	-	
Dielectric Dissipation Factor – at 1 MHz	IEC 60250	-	