

DATASHEET

KETRON PEEK GF30

This 30% glass fibre reinforced grade offers a higher stiffness and creep resistance than Ketron PEEK 1000 and has a much better dimensional stability. This grade is very appropriate for structural applications carrying high static loads for long periods of time at elevated temperatures. The suitability of Ketron PEEK GF30 for sliding parts, however, is to be carefully examined since the glass fibres tend to abrade the mating surface.

Applications

- Structural Parts
- Bushings
- Bearings
- Seals
- Back Up Rings

Availability

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

Typical Properties

General Properties	Method	Unit	Test Result
Physical Properties			
Colour	-	-	Natural
Density	ISO 1183-1	g/cm ²	1.51
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)	0.43
Coefficient of Linear Thermal Expansion:			
- Average value between 23 and 100°C	-	W/(K.m)	30x10 ⁻⁶
- Average value between 23 and 150°C	-	W/(K.m)	30x10 ⁻⁶
- Average value above 150°C	-	W/(K.m)	65x10 ⁻⁶
Temperature of Deflection Under Load:			
- Method A: 1.8 MPa	ISO 75-1/-2	°C	230
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	80
- Tensile Strain at Yield	ISO 527-1/-2	%	3.5
- Tensile Strain at Break	ISO 527-1/-2	%	4.5
- Tensile Modulus of Elasticity	ISO 527-1/-2	MPa	7000
Flexural Test:			
- Flexural Strength	ISO 178	MPa	155
- Flexural Modulus of Elasticity	ISO 178	MPa	
Compression Test:			
- Compressive Stress @ 1/2/5% Nominal Strain	ISO 604	MPa	54/103/155
Charpy Impact Strength - Unnotched	ISO 179-1-1eU	kJ/m2	25
Charpy Impact Strength - Notched	ISO 179-1-1eU	kJ/m2	3
Rockwell Hardness	ISO 2039-2	-	100
Dynamic Coefficient of Friction	ISO 7148-2(15)	-	0.3-0.45
Wear Rate	ISO 7148-2(15)	Um/km	7
Electrical Properties			
Electric Strength	EC 60243-1	kV/mm	24
Volume Resistivity	IEC 60093	Ohm.cm	>10E 14
Surface Resistivity	IEC 60093	Ohm	>10E 13
Relative Permittivity – at 1MHz	IEC 60250	-	3.60
Dielectric Dissipation Factor – at 1 MHz	IEC 60250	-	0.002