M SEALS **PKBG30-BRM85**

Reinforced Lubricated Modified PEEK

MATERIAL DATA SHEET (Version 6.0 – 05.2022)



Description

M Seals PKBG30-BRM85 material is a modified PEEK which has been reinforced with fillers of Carbon Fibre and Lubricants. The addition of Carbon fibre fillers to PEEK provides the material with excellent thermal resistance, higher compressive strength, lower wear properties and lower creep values. The additional internal lubrication helps increase the hardness and stiffness of the material while improving the coefficient of friction and wear values in comparison to other standard filled PEEK compounds.

PKBG30-BRM85 material is commonly used for guide rings, wear rings, bushes, valve seat seals and applications requiring excellent hydrolysis and steam resistance.

Physical Properties

Property	Test method	Unit	Typical value
Colour			Black
Density	ISO 1183	g/cm^3	1.43
Hardness	ISO 868	Shore D	85
Tensile Strength	ISO 527-2	MPa	70
Elongation at break	ISO 527-2	%	2
Glass transition temperature *	DIN 53765	°C	+143
Melting temperature	DIN 53765	°C	+343
Service temperature short term **		°C	+300
Service temperature short term **		°C	+260

* (Information found from public sources)
** (Individual testing in application conditions is mandatory)

Main Characteristics

- Excellent thermal resistance
- High compressive strength
- Good sliding ability
- Good creep resistance
- Good wear properties
- Hydrolysis & steam resistance

Typical Products

- Wear strip
- Bearing rings / guide rings
- Bushes
- Valve seat seals
- Anti-Extrusion / Back-Up Rings
- Bespoke parts

Typical Applications

Due to its excellent thermal resistance, compressive strength and sliding ability, this material is an excellent material choice for applications where standard PEEK materials may not be suitable or where lower friction is required. PC704 is commonly used within the Oil and Gas and Aerospace industries.

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