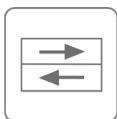


M SEALS PKGRF-BLKD85

Graphite Filled PEEK

MATERIAL DATA SHEET (Version 6.0 – 05.2022)



Description

M Seals PKGRF-BLKD85 material is a high-performance graphite reinforced PEEK material that provides enhanced mechanical properties and reduced coefficient of friction values. This material has excellent thermal resistance, high compressive strength, low wear properties, good sliding ability and low creep values.

PKGRF-BLKD85 material is commonly used for guide rings, wear rings, bushes, valve seat seals, scraper seals and other applications requiring low friction and excellent hydrolysis and steam resistance.

Physical Properties

Property	Test method	Unit	Typical value
Colour			Grey/Black
Density	ASTM D792	g/cm ³	1.28-1.35
Hardness	ASTM D2240	Shore D	85
Tensile strength	ASTM D638	MPa	>80
Tensile modulus	ASTM D638	MPa	>6
Elongation at break	ASTM D638	%	>3.5
Flexural strength	ASTM D790	Mpa	>90
Compressive strength	ASTM D695	Mpa	>100
Glass transition temperature *	ASTM D3418	°C	+143
Melting temperature	ASTM D3418	°C	+341
Service temperature short term **		°C	+300
Service temperature long term **		°C	-50/+250

* (Information found from public sources)

** (Individual testing in application conditions is mandatory)

Main Characteristics

- Excellent thermal resistance
- High compressive strength
- Excellent 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 because of higher frictional values. This material is frequently used for low friction wear rings and valve seat seals.

Tel: 0044 (0) 114 243 2777 . Fax: 0044 (0) 114 242 2300 . Mail: sales.esd@m-seals.co.uk . Web: www.m-seals.com

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