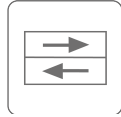


# DMR Material PTCF1510-GD65

## Lubricated Carbon Fibre Filled PTFE



### MATERIAL DATA SHEET (Version 5.1 – 05.2019)



### Description

DMR Seals PTCF1510-GD65 material is a lubricated Carbon Fibre reinforced PTFE material. The addition of Carbon Fibre to PTFE provides increased deformation resistance, higher compressive strength, increased hardness, lower wear and lower creep values, while the internal lubricant package provides improved sliding ability.

PTCF1510-GD65 material is commonly used for O-Ring energised composite seals and spring energised seals and can be utilised for seals in both unlubricated and lubricated hydraulic fluids, although water-based fluids with zinc additives should be avoided where possible.

### Physical Properties

Property	Test method	Unit	Typical value
Colour			Grey/Black
Density	ASTM D792	g/cm <sup>3</sup>	1.94-2.02
Hardness	ASTM D2240	Shore D	≥63
Elongation at break	ASTM D4745	%	≥140
Tensile Strength	ASTM D4745	N/mm <sup>2</sup>	≥14
Deformation under load *	ASTM D621	%	≤2.9
Coefficient of Linear Thermal Expansion **	ASTM D696	1/K.10 <sup>-5</sup>	6
Coefficient of Linear Thermal Expansion ***	ASTM D696	1/K.10 <sup>-5</sup>	8
Coefficient of friction (static)	ASTM D3702	Points	0.15
Wear	DIN 53481	cm <sup>3</sup> .min/kg.m.h	5.2
Service temperature		°C	-200 to +260

\* (24 Hours @ 13.7 N/mm<sup>2</sup> cross direction)

\*\* (+20 to +100°C)

\*\*\* (+150 to +260°C)

### Main Characteristics

- High compressive strength
- Excellent sliding ability
- Excellent deformation resistance
- Low creep rate
- Excellent thermal and wear properties

### Typical products

- Composite seals
- Spring energised seals
- Bearing rings / guide rings
- Bushes
- Bespoke parts

### Typical Applications

PTCF1510-GD65 has vastly improved wear, temperature, deformation and extrusion resistance when compared to unfilled or other standard grades of filled PTFE. This material is commonly used as a sealing material for static and dynamic spring energised seals, and all of the O-Ring energised Composite seal ranges working in poorly lubricated

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or heavy duty service. It is also a good choice for HF acid and strong Alkali where glass reinforced PTFE's would be unsuitable.

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