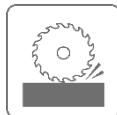
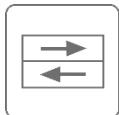


M SEALS PTCF1510-GD65

Lubricated Carbon Fibre Filled PTFE

MATERIAL DATA SHEET (Version 6.0 – 05.2022)



Description

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

* (24 Hours @ 13.7 N/mm² 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 or heavy duty service. It is also a good choice for HF acid and strong Alkali where glass reinforced PTFE's would be unsuitable.

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

M Seals believes that the information above is an accurate description of the typical characteristics and/or uses of the product or products, however M Seals makes no warranty, expressed or implied, that parts manufactured from this / and or any other material will perform satisfactorily in the customers application. It is the customers responsibility to thoroughly test products in their specific application to determine performance, efficiency and safety for each end-use product, device or application. The information and data contained herein are based on standard test pieces according to the corresponding ISO, DIN & ASTM standards and cannot be directly related to finished seals, gaskets or other sealing products and should be used only as a general guide.