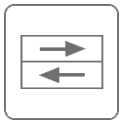
# M SEALS **FC403**

## Carbon Reinforced PTFE

**MATERIAL DATA SHEET (Version 6.0 – 05.2022)**


High Temperature


Chemical Resistance


Low Friction


Wear Resistance

## Description

M Seals FC403 material is a PTFE which has been reinforced with a filler of 25% Carbon. The addition of Carbon fillers to PTFE provides higher compressive strength, lower wear and lower creep values while improving sliding properties.

FC403 PTFE material is commonly used as a bearing material and for spring energised seals. While FC403 can work in a variety of fluids, it is particularly suitable for dry or poorly lubricated applications, such as water or water based hydraulic fluids.

## Physical Properties

| Property | Test method | Unit | Typical value |
|---|---|---|---|
| Colour | | | Grey/Black |
| Density | ASTM 1457 | $g/cm^3$ | 2.10 |
| Hardness | ASTM 1706 | Shore D | $\geq$60 |
| Tensile Strength (cross direction) | ASTM D4894 | MPa | 15 (Min) |
| Elongation at break (cross direction) | ASTM D4894 | % | 90 (Min) |
| Service temperature * | | °C | -200 to +260 |

* (Individual testing in application conditions is mandatory)

## Main Characteristics

- Good choice for unlubricated service
- Good sliding ability
- Low creep rate
- Low wear properties

## Typical Products

- Back-up rings
- Bearing bushes / Guide rings
- Spring energised seals
- Thrust washers

## Typical Applications

Due to its excellent wear resistance, good compressive strength and sliding ability, FC403 is a good material choice for guide rings, back-up rings, spring energised seals and bearing bushes.

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