

M SEALS PTC25-GD63

Carbon Graphite Filled PTFE



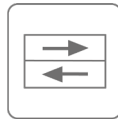
MATERIAL DATA SHEET (Version 6.0 – 05.2022)



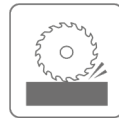
High Temperature



Chemical Resistance



Low Friction



Wear Resistance

Description

M Seals PTC25-GD63 material is a PTFE which has been reinforced with a filler of Carbon/Graphite. The addition of Carbon/Graphite fillers to PTFE provides higher compressive strength, lower wear and lower creep values while improving sliding properties

PTC25-GD63 PTFE material is commonly used for O-Ring energised composite seals, spring energised seals, valve seat seals, guide rings, wear rings, bushes and back-up rings. PTC25-GD63 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 D792	g/cm ³	2.05-2.11
Hardness	ASTM D2240	Shore D	≥64
Tensile Strength	ISO 527	N/mm ²	≥14
Elongation at break	ISO 527	%	≥90
Deformation under load *	ASTM D621	%	≤7
Permanent deformation **	ASTM D621	%	≤5
Coefficient of Linear Thermal Expansion ***	ASTM D696	10 ⁻⁵ (mm/mm)/ °C	8-12
Dynamic coefficient of friction	ASTM D3702	Points	0.14
Service temperature ****		°C	-200 to +260

* (24 Hours @ 13.7 N/mm² @ 23°C)

** (After 24h relaxation)

*** (+25 to +100°C)

**** (Individual testing in application conditions is mandatory)

Main Characteristics

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

Typical Products

- Composite seals
- Back-up Rings
- Bearing rings / guide rings
- Spring energised seals
- Valve seat seals

Typical Applications

Due to its excellent wear resistance, compressive strength and sliding ability, PTC25-GD63 is an excellent material choice for composite seals, valve seat seals, guide rings, back-up rings, spring energised seals and bearing bushes. As mentioned above, this material is particularly suited to unlubricated service using water or water based fluids.

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