M SEALS **PTC25M-GD66**

Carbon Filled Modified PTFE Fluoropolymer

MATERIAL DATA SHEET (Version 6.0 – 05.2022)


High Temperature


Chemical resistance

Deformation Resistance

Description

M Seals material PTC25M-GD66 is a carbon reinforced modified PTFE compound (commonly referred to as TFM™). PTC25M-GD66 has a denser polymer structure, which provides the material with an almost 50% increase in permeation and deformation resistance against standard carbon filled grades of PTFE. The unique polymer structure also provides improved stress recovery and a smoother surface finish on components in comparison to standard carbon filled PTFE, which is of the upmost importance for critical sealing products, such as ball valve seats or spring energised seals.

Physical Properties

Property	Test method	Unit	Typical value
Colour			Black
Density	ISO 12086	g/cm^3	2.11-2.16
Hardness	DIN 53505	Shore D	62-68
Tensile Strength	DIN 53455	N/mm^2	13-15
Elongation at break	DIN 53455	%	40-70
Tensile Modulus	DIN 53457	N/mm^2	1150
Deformation resistance *	ASTM–D621	%	4
Coefficient of thermal expansion **		$1/K.10^{-5}$	11
Compress strength at 1% deformation (23°C)	DIN53454	N/mm^2	14
Service temperature***		°C	-200/+260

*** (24 Hours @ 23°C – 15 N/mm²)**
**** (150 - 260°C)**
***** (Testing in application is mandatory)**

TFM™ is a registered trademark of 3M company

Main Characteristics

- Excellent deformation resistance
- Excellent permeation resistance
- Excellent stress recovery
- Improved permeation resistance
- Excellent temperature & chemical resistance

Typical Products

- Soft seat seals
- Spring energised seals
- Gaskets
- Composite seals
- Valve linings

Typical Applications

Due to its excellent elasticity, deformation and increased permeation resistance PTC25M-GD66 is a superb choice for soft seat seals and spring energised seals in valve applications as well as many others where standard carbon filled PTFE could be replaced.

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