

# M SEALS PPS-GF-D88

## Glass Fibre Reinforced PPS

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



#### Description

M Seals PPS-GF-D88 material is a high-performance glass fibre reinforced PPS (Polyphenylensulfide) material. This material was developed to bridge the gap between general engineering plastics such as POM/Nylon and the more advanced engineering plastics such as PEEK.

Because of the high level of glass fibre reinforcement, this material has excellent mechanical strength and rigidity in comparison to unreinforced PPS, even when working at elevated temperatures. The glass fibre reinforcement makes this material suitable for components that will be subjected to high static loads in high temperature conditions. The addition of glass fibres to this material however can make it abrasive to countersurfaces if used in dynamic applications.

#### Physical Properties

Property	Test method	Unit	Typical value
Colour			Black
Density	ISO 1183	g/cm <sup>3</sup>	1.63
Hardness	ISO 868	Shore D	88
Tensile Strength	ISO 527-2	MPa	83
Tensile strength at yield	ISO 527-2	MPa	83
Elongation at break	ISO 527-2	%	2
Flexural strength	ISO 178	Mpa	145
Modulus of flexural elasticity	ISO 178	Mpa	6600
Glass transition temperature *	DIN 53765	°C	+93
Melting temperature	DIN 53765	°C	+280
Service temperature short term **		°C	+260
Service temperature long term **		°C	+230

\* (Information found from public sources)

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

#### Main Characteristics

- Good thermal resistance
- Good chemical resistance
- Good resistance to high energy radiation
- Good stiffness and creep resistance
- Good dimensional properties
- Good heat deflection temperature

#### Typical Products

- Wear strip
- Bearing rings / guide rings
- Bushes
- Valve seat seals
- Anti-Extrusion / Back-Up Rings
- Bespoke parts

#### Typical Applications

Due to its good thermal and chemical resistance, high strength and dimensional stability, this material is a good material choice for applications where general engineering plastics such as POM or Nylon cannot be used and where advanced engineering plastics such as PEEK are an excessive material choice. PPS-GF-D88 is commonly used within the Oil and Gas and Aerospace industries.

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