M SEALS **ZC318**

Ultra-High Temperature FFKM (Perfluoroelastomer)

MATERIAL DATA SHEET (Version 6.0 – 05.2022)

M SEALS - Part of Diploma PLC

Description

M Seals FFKM ZC318 is a high performance Perfluoroelastomer material that has superb thermal resistance characteristics coupled with broad chemical resistance. ZC318 FFKM / Perfluoroelastomer material can provide superior performance levels in the harshest environments and can be the ideal solution for sealing applications where the limits of other elastomers have been exceeded.

Physical Properties

Property	Test method	Unit	Typical value
Colour			Black
Density	ISO 1183-1	g/cm^3	1.95
Hardness	ISO 7619-1	Shore A	75 (+/-5)
Elongation at break	ASTM D412	%	155
Tensile strength	ASTM D412	MPa	18.5
Tear resistance	ASTM D624/B	N/mm	33
Low temperature resistance (TR10)	ASTM D 1329	°C	-2
Compression set (25% Deflection for 70 Hours @ +200°C)	ASTM D395/B	%	21
Ageing in 200°C steam for 168 hours	ASTM D471		
Hardness change		Shore A	-4
Volume swell		%	+3.5
Ageing in 40°C MEK for 168 hours	ASTM D471		
Hardness change		Shore A	-3.5
Volume swell		%	+5
Ageing in 275°C air for 70 hours	ASTM D573		
Hardness change		Shore A	+1
Tensile strength		Mpa	-10
Elongation at break		%	+15
Ageing in 300°C air for 70 hours	ASTM D573		
Hardness change		Shore A	+1.5
Tensile strength		Mpa	-35
Elongation at break		%	+40

Minimum service Temperature: -10°C
Maximum service Temperature: +330°C

Main Characteristics

- Superb thermal resistance
- Broad chemical resistance
- Good compression set resistance
- Excellent performance in harsh environments

Typical Products

- O-Ring seals
- X-Ring seals
- Piston T-Seal
- Rod T-Seal

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