

Material Data Sheet

The information on this data sheet refers to products of UK origin.

FEP Encapsulated 'O'-Rings - Properties	
Encapsulation	FEP - fluorinated ethylene propylene (transparent)
Core	Silicone (red, white) Viton™ (black)
Temperature range	Silicone: -60°C to 205°C (short durations: up to 260°C) Viton™: -20°C to 140°C
Hardness	Silicone: 85 to 90 Shore A Viton™: 90 to 95 Shore A

Encapsulation - Properties - FEP	
Tensile strength	25.0 - 26.0 MPa ASTM D638
Elongation at break	300 - 310% ASTM D638
Specific gravity	2.12 - 2.17 ASTM D792
Dielectric Constant (10 ⁶ Hz) ≤	2.15 ASTM D150 & D1531
Dissipation Factor (10 ⁶ Hz) ≤	7.0 x 10 ⁻⁴ ASTM D150 & D1531
Melting point	265°C (±10) ASTM D3418 & D4591
Melting index	2.1 - 5.0 g/10min ASTM D1238 & D2116

PFA Encapsulated 'O'-Rings - Properties	
Encapsulation	PFA - perfluoroalkoxy alkanes (transparent)
Core	Silicone (red, white) Viton™ (black)
Temperature range	Silicone: -60°C to 260°C (short durations: up to 300°C) Viton™: -20°C to 140°C
Hardness	Silicone: 85 to 90 Shore A Viton™: 90 to 95 Shore A

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Encapsulation - Properties - PFA	
Tensile strength	35 MPa ASTM D1708
Elongation at break	380% ASTM D1708
Specific gravity	2.14 ASTM D792
Melting point	307°C DSC
Melting index	2.00 g/10min 372°C, 5 kgf

Core - Properties - Silicone	
Hardness	70 (±5) Shore A ASTM D2240, ISO 7619-1
Tensile strength	7 MPa ASTM D412, ISO 37
Elongation at break	163% DIN 53504, ISO 37
Compression set	ASTM D395 TIPO 1A, ISO 815 TIPO A
D.R.C. 22h/177°C/25%	21%
D.R.C. 70h/177°C/25%	37%
Density	1.19 g/cm ³ ISO 1183-1A
Tear strength	25 N/mm ASTM D624, ISO 34
Colour	Red, white

Core - Properties - Viton™	
Hardness	76 (±5) Shore A ASTM D2240
Tensile strength	15.5 MPa ASTM D412
Elongation at break	198% ASTM D412
Compression set 22h/200°C	8.56% ASTM D395
100% modulus	6.3 MPa ASTM D412
Colour	Black

Compliance Information

FEP Encapsulation complies with the requirements of CFR 21.177, sub section 177.1550 for Perfluorocarbon Resins. Silicone core complies with the requirements of CFR 21.177, sub section 177.2600 for Rubber Articles. Please contact us for all other regulatory compliance details or any of your specific requirements.

Guidance only: Product performance is dependent on many factors and operating conditions. Thorough independent product and equipment testing is always advised before proceeding with installation for the final intended use.

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