



Fusion 944 Sealing Solutions

Compound No./Material Name: Fusion™ 944	Rubber Classification: (ASTM D1418): FKM	Service Temperature Range: -35°F to 450°F (-37°C to 232°C)	Color: Black
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Description	Typical
Original Properties (ASTM Standard)	
Specific Gravity (D792)	1.89
Hardness, IHRD (D1415)	90
Tensile Strength @ Break, psi [MPa] (D412)	2,750 [19.0]
Elongation, % (D412)	170
Modulus @ 50% Elongation, psi [MPa] (D412)	900 [6.2]
Modulus @ 100% Elongation, psi [MPa] (D412)	1,600 [11.0]
Tear Strength, lb/in [kg/cm] (D624, Die C)	160 [28.6]
TR10/50, °F [°C] (D1329)	-11.2 [-24]
Tg, °F [°C] (D3418)	-14.8 [-26.8]
Coefficient of Linear Thermal Expansion, -35°F to -4°F (-37°C to 20°C), $\mu\text{in}/(\text{in}^\circ\text{F})$ [$\mu\text{m}/(\text{m}^\circ\text{C})$] (E831)	46.7 [84.1]
Coefficient of Linear Thermal Expansion, -4°F to 73°F (-20°C to 23°C), $\mu\text{in}/(\text{in}^\circ\text{F})$ [$\mu\text{m}/(\text{m}^\circ\text{C})$] (E831)	87.3 [157.1]
Coefficient of Linear Thermal Expansion, 73°F to 284°F (23°C to 140°C), $\mu\text{in}/(\text{in}^\circ\text{F})$ [$\mu\text{m}/(\text{m}^\circ\text{C})$] (E831)	94.4 [169.9]
Compression Set @ 25% Deflection (ASTM Standard)	
70 Hours @ 392°F (200°C), In Air, % of Original Deflection on -214 O-rings, % (D1414)	62
Fluid Aging (ASTM Standard)	
70 Hours @ 275°F (135°C), In AMS 3020, % (D471)	12
Gas Permeability (ASTM Standard)	
Carbon Dioxide, $\text{cm}^2/\text{sec-atm}$ (D1434)	1.8×10^{-9}
Methane, $\text{cm}^2/\text{sec-atm}$ (D1434)	1.6×10^{-9}
Nitrogen, $\text{cm}^2/\text{sec-atm}$ (D1434)	6.6×10^{-9}
O-ring Leak Test (200 psi N ₂), average of 3 tests, °F [°C] (ASTM Standard*)	-35 [-37]

Note

Unless otherwise noted, all tests performed on ASTM slabs and buttons.

*O-ring Leak Test (not an ASTM standard) uses three -214 o-rings compressed 19% and pressurized with 200 psi N₂ pressure. The reported value is average temperature at which the 3 seals reach a leak rate of 2 sccm when the seals are cooled from room temperature at a rate of 0.3°C/minute.

Contact Us

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