



Fusion™ 731 Sealing Solutions

Compound No./Material Name:	Rubber Classification:	Service Temperature Range:	Color:
Fusion™ 731	(ASTM D1418): FKM	-22°F to 450°F (-30°C to 232°C)	Black

Description		Typical
Original Properties* (ASTM Standard)		
Specific Gravity (D297)		1.84
Hardness, Shore A, Points (D2240)		75
Hardness, Shore M, Points (D2240)		78
Tensile Strength @ Break, psi [MPa] (D1414)		2,200 [15.2]
Elongation, % (ASTM D1414)		190
Modulus @ 50% Elongation, psi [MPa] (D1414)		415 [2.9]
Modulus @ 100% Elongation, psi [MPa] (D1414)		980 [6.8]
Tear Strength, lb/in. [kg/cm] (D624, Die B)		195 [34.8]
TR-10/50, °F [°C] (D1329)		6 [-14]
Coefficient of Linear Thermal Expansion, 10 ⁻⁵ in./in.-°F [cm/cm-°C] (E228)		11.7 [21.1]
Coefficient of Friction, (D1894, Method C)		
Static		1.3
Kinetic		0.5
Compression Set @ 25% Deflection* (ASTM Standard)		
22 Hours @ 392°F (200°C), In Air, % of Original Deflection, % (D395, Method B)		10
Air Aging (ASTM Standard)		
70 Hours @ 302°F (150°C)	Hardness Change, Points (D573)	+6
	Tensile Change, % (D573)	-12
	Elongation Change, % (D573)	+6
70 Hours @ 528°F (276°C)	Hardness Change, Points (D573)	+6
	Tensile Change, % (D573)	-30
	Elongation Change, % (D573)	+16
Fluid Aging (ASTM Standard)		
168 Hours @ 212°F (100°C) In Lubricating Oil (SAE 10W)	Hardness Change, Points (D471)	-6
	Tensile Change, % (D471)	-27
	Elongation Change, % (D471)	-9.6
	Volume Change, % (D471)	+4.4
168 Hours @ 212°F (100°C) In Actuator Oil	Hardness Change, Points (D471)	-4
	Tensile Change, % (D471)	-15
	Elongation Change, % (D471)	+1.2
	Volume Change, % (D471)	+3.4

Contact Us

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7/18-GT DS-US-GE-157



Compound No./Material Name:

Fusion™ 731

Rubber Classification:

(ASTM D1418): **FKM**

Service Temperature Range:

-22°F TO 450°F (-30°C TO 232°C)

Color:

Black

Description		Typical
Fluid Aging (continued) (ASTM Standard)		
70 Hours @ 302°F (150°C) In ASTM Oil #1	Hardness Change, Points (D471) Tensile Change, % (D471) Elongation Change, % (D471) Volume Change, % (D471)	0 -15 -1 +1.5
70 Hours @ 347°F (175°C) In AMS 3021	Hardness Change, Points (D471) Tensile Change, % (D471) Elongation Change, % (D471) Volume Change, % (D471)	-10 -23 -2 +19
70 Hours @ Room Temperature In Reference Fuel B	Hardness Change, Points (D471) Tensile Change, % (D471) Elongation Change, % (D471) Volume Change, % (D471)	+1 -1 +1 +1
7 Days @ Room Temperature In Reference Fuel B	Hardness Change, Points (D471) Tensile Change, % (D471) Elongation Change, % (D471) Volume Change, % (D471)	+2 0 -6 +1
7 Days @ Room Temperature In Reference Fuel C	Hardness Change, Points (D471) Tensile Change, % (D471) Elongation Change, % (D471) Volume Change, % (D471)	+2 -6 -10 +1.4
70 Hours @ 300°F (149°C) In MIL-H-7808	Hardness Change, Points (D1414) Tensile Change, % (D1414) Elongation Change, % (D1414) Volume Change, % (D1414) TR 10/50, °F [°C] (D1329)	-10 -18 +10 +16 -11 [24]
70 Hours @ 300°F (149°C) In MIL-H-83282	Hardness Change, Points (D1414) Tensile Change, % (D1414) Elongation Change, % (D1414) Volume Change, % (D1414) TR 10/50, °F [°C] (D1329)	-5 -8 +14 +4 -1 [18]

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Description	Typical
Compression Set @ 25% Deflection (ASTM Standard)	
22 Hours @ 302°F (150°C), in Air, % of Original Deflection, % (D395)	6
70 Hours @ 300°F (149°C), in Air, % of Original Deflection, % (D395)	6
22 Hours @ 392°F (200°C), in Air, % of Original Deflection, % (D395)	9
70 Hours @ 392°F (200°C), in Air, % of Original Deflection, % (D395)	11
166 Hours @ 347°F (175°C), in Air, % of Original Deflection, % (D395)	24
70 Hours @ 347°F (175°C), in AMS 3021 Fluid., % of Original Deflection, % (D395)	16
70 Hours @ 347°F (175°C), in AMS 3021 After 18-Hour Soak, % of Original Deflection, % (D395)	24

*Tests performed on 214 o-rings. Specification: ASM 7276.
Unless otherwise noted, all tests performed on ASTM slabs and buttons.

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