

Viton Material Specification

Standard Gasket Compound	HK7A1	
Common Names/Aliases	Fluoroelastomer, Viton ®	
Grade	Commercial	
Color	Black	
Chemical Group (ASTM D-2000 Code)	FK, FKM (HK)	
Application	Relatively expensive, but providing excellent combination of high temperature and chemical resistance not available otherwise.	
Competing Compounds	V747-75, 19357, V14-75, 9009-75, F13664, 514AD	
Standard Specifications (related technical specs detailed below)	ASTM D-2000-01 M6HK810 A1-10 B38 C12 C20 EF31 EO88 F15; SAE J200	
	Physical Properties	
Item (Unit)	Specification	Actual (Black)
Hardness - Durometer	75 +/- 5 Shore A	76 Shore A
Tensile Strength	1450 psi (10 MPa) min	1773 psi (6.9 MPa)
Elongation%	150% min	220%
Temperature Range	n/a	-20 F/+400 F (-29 C/+204 C)
Specific Gravity	n/a	1.85
	Actual Test Data (ASTM D2000 Suffix Reference)	
	(A1-10) Heat Age, 70 Hrs @ 480° F (250° C)	
Hardness-Durometer Change	+10/-0 Shore A	+2 Shore A
Tensile Strength Change	-25% max	+5%
Elongation% Change	-25% max	-8%

	(B38) Compression Set, 22 hrs @ 392° F (200° C)	
Original Deflection	+15% max	10.8%
	(F15) Low Temperature Brittleness, 3 min @ -67° F (-25° C)	
Per ASTM D2137, Method A	Non-Brittle	Pass
	(C12, C20) Resistance to Ozone (Method B), Outdoor Aging	
Per ASTM D1171, Method B	No Cracking	Pass
	(EF31) Fuel Age, 70 hrs @ 73° F (23° C) in Reference Fuel C	
Hardness-Durometer Change	+/-5 Shore A	-1 Shore A
Tensile Strength Change	-40% max	-21%
Elongation% Change	-20% max	-12%
Volume Change	-0/+10%	+3%
	(EO88) Fluid Resistance, 70 hrs @ 392° F (200° C) in Stauffer 7700 SAE Fluid No. 2	
Hardness-Durometer Change	-15/+5 Shore A	-6 Shore A
Tensile Strength Change	-40% max	-21%
Elongation% Change	-20% max	-14%
Volume Change	+25% max	+8%