

Material Datasheet

Compound #: N80-B102

Nitrile (Buna), UL 157

Material Summary

Material Type:	NBR
Durometer:	80
Color:	Black
Special Properties:	UL 157
Static Temperature Range:	-40°C (-40°F) to 100°C (212°F)
Cure System:	Sulfur
Meets Specification:	ASTM D2000 M7BG814 A14 B14 EA14 EF11 EF21 EO14 EO34 F16 Z1 Z2

Original Properties	Requirements	Typical Results
Hardness, (Shore A) (ASTM D2240-15 ^{e1})	80±5	81
Tensile Strength, psi(MPa) (ASTM D412-16 ^{e1})	2031(14)(min)	2656(18.32)
Elongation, (%) (ASTM D412-16 ^{e1})	125(min)	203
Modulus at 100%, psi(MPa) (ASTM D412-16 ^{e1})		1440(9.93)
Density, (Mg/m ³) (CNS 5341-96, Method A)		1.28
(A14) Heat age, 70 Hrs @ 100 °C (ASTM D573-04)		
Hardness Change, pts.	±15	+4
Tensile Strength Change, %	±30	+2
Elongation Change, %	-50(max)	-17
Weight Change, %		-0.2
(B14) Compression set, 22 Hrs @ 100 °C (ASTM D395-18, Method B)		
-	25%(button)(max)	11.9
(EA14) Water Resistance, 70 Hrs @ 100 °C (ASTM D471-16a)		
Hardness Change, pts.	±10	+1
Tensile Strength Change, %	-	+5
Elongation Change, %	-	-22
Volume Change, %	±15	+5.3
(EF11) ASTM Fuel A Resistance, 70 Hrs @ 23 °C (ASTM D471-16a)		
Hardness Change, pts.	±10	-2
Tensile Strength Change, %	-25(max)	-6
Elongation Change, %	-25(max)	-6
Volume Change, %	-5~+10	+3.1

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(EF21) ASTM Fuel B Resistance, 70 Hrs @ 23 °C (ASTM D471-16a)

Hardness Change, pts.	-30~0	-13
Tensile Strength Change, %	-60(max)	-23
Elongation Change, %	-60(max)	-26
Volume Change, %	0~+40	+26.7

(EO14) IRM 901 Oil, 70 Hrs @ 100 °C (ASTM D471-16a)

Hardness Change, pts.	-5~+5	+2
Tensile Strength Change, %	-25(max)	+1
Elongation Change, %	-45(max)	-18
Volume Change, %	-10~+5	-3.9

(EO34) IRM 903 Oil, 70 Hrs @ 100 °C (ASTM D471-16a)

Hardness Change, pts.	-10~+5	-7
Tensile Strength Change, %	-45(max)	-34
Elongation Change, %	-45(max)	-19
Volume Change, %	0~+25	+7.3

(F16) Low-Temperature Brittleness Point Test, 3 minute @ -35 °C (ASTM D2137-11, Method C)

Sample type: T-50,	-	-
Coolant : Isopropyl alcohol,	-	-
Low Temperature Property,	no-crack	pass

Report Date: 11/5/2021

Information within this report is believed to be accurate and reliable. However, Global O-Ring and Seal makes no warranty, expressed or implied, that parts supplied in this material will perform satisfactorily in specific applications. It's the customer's responsibility to evaluate prior to use.