

Material Test Report

Compound N50-B102

Nitrile (Buna), Black, UL 157

Material Summary		
Material Type:	Butadiene Acrylonitrile Copolymer (NBR)	
Durometer:	50	
Color:	Black	
Special Properties:	UL 157	
Recommended Temperature Range (Static):	-40°C (-40°F) to 100°C (212°F)	
Cure System:	Sulfur	
Meets Specification:	ASTM D2000 M2BG510 A14 B14 EA14 EO14 EO34 Z1	
ORIGINAL PROPERTIES	Requirements	Typical Results
Hardness,(shoreA)(ASTMD2240-15 ^{°1})	50±5	52
Tensile Strength,psi(MPa)(ASTMD412-16)	1450(min)	1695(11.68)
Elongation,(%)(ASTMD412-16)	300(min)	587
Modulus at 100%,psi(MPa)(ASTMD412-16)		305(2.10)
Density,(Mg/m ³)(CNS5341-96)		1.24
HEAT AGE, A14 (70 hrs. @ 100°C)	Requirements	Typical Results
Hardness Change, pts., ASTM D573-04	±15	+2
Tensile Strength Change, %, ASTM D573-04	±30	0
Elongation Change, %, ASTM D573-04	-50(max)	-3
Weight Change, %, ASTM D573-04		-2.2
COMPRESSION SET, B14 (22 hrs. @ 100°C)	Requirements	Typical Results
-	25%(button)(max)	13.0
WATER RESISTANCE, EA14 (70 hrs. @ 100°C)	Requirements	Typical Results
Hardness Change, pts.,ASTM D471-16a	±10	-2
Tensile Strength Change, %, ASTM D471-16a	-	+7
Elongation Change, %, ASTM D471-16a	-	+2
Volume Change, %, ASTM D471-16a	±15	+7.2
IRM 901 OIL, EO14 (70 hrs. @ 100°C)	Requirements	Typical Results
Hardness Change, pts., ASTM D471-16a	-5~+10	+8
Tensile Strength Change, %, ASTM D471-16a	-25(max)	+3
Elongation Change, %, ASTM D471-16a	-45(max)	-15
Volume Change, %, ASTM D471-16a	-10~+5	-9.3

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IRM 903 OIL, EO34 (70 hrs. @ 100°C)	Requirements	Typical Results
Hardness Change, pts., ASTM D471-16a	-10~+5	-2
Tensile Strength Change, %, ASTM D471-16a	-45(max)	+14
Elongation Change, %, ASTM D471-16a	-45(max)	-1
Volume Change, %, ASTM D471-16a	0~+25	+4.3

Report Date: 11/21/2020

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.