

Material Test Report

Compound N90-A101

Nitrile (Buna), Black, General Purpose

Material Summary

Material Type:	Butadiene Acrylonitrile Copolymer (NBR)
Durometer:	90
Color:	Black
Special Properties:	General Purpose
Recommended Temperature Range (Static):	-25°C (-13°F) to 121°C (250°F)
Cure System:	Sulfur
Meets Specification:	ASTM D2000 M7BG910 A14 B14 EA14 EF11 EF21 EO14 EO34

Original Properties	Requirements	Typical Results
Hardness, Shore A (ASTM D2240-15)	90 ± 5	86 to 87
Tensile Strength, MPa (ASTM D412-16)	≥10	15.79 to 18.2
Elongation, % (ASTM D412-16)	≥100	133 to 182
Specific Gravity (ASTM D297-15)		1.31 to 1.37
Heat Resistance, A14 (70 hrs @ 100°C)	Requirements	Typical Results
Hardness Change, pts (ASTM D573-04)	±15	0 to +4
Tensile Change, % (ASTM D573-04)	±30	+1 to +5
Elongation Change, % (ASTM D573-04)	≤ -50	-19 to -18
Compression Set, B14 (22 hrs @ 100°C)	Requirements	Typical Results
Compression Set, % (ASTM D395-18)	≤25	5.8 to 15
Water Resistance, EA14 (70 hrs @ 100°C)	Requirements	Typical Results
Hardness Change, pts (ASTM D471-16a)	±10	-4 to -2
Volume Change, % (ASTM D471-16a)	±15	+3 to +5.2
Fuel A Resistance, EF11 (70 hrs @ 23°C)	Requirements	Typical Results
Hardness Change, pts (ASTM D471-16a)	±10	-5 to +1
Tensile Change, % (ASTM D471-16a)	≤ -25	-4 to -3
Elongation Change, % (ASTM D471-16a)	≤ -25	-7 to +2
Volume Change, % (ASTM D471-16a)	-5 to +10	+0.4 to +4
Fuel B Resistance, EF21 (70 hrs @ 23°C)	Requirements	Typical Results
Hardness Change, pts (ASTM D471-16a)	0 to -30	-14
Tensile Change, % (ASTM D471-16a)	≤ -60	-34 to -21
Elongation Change, % (ASTM D471-16a)	≤ -60	-32 to -17
Volume Change, % (ASTM D471-16a)	0 to +40	+18.6 to +21

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IRM 901 Oil Resistance, EO14 (70 hrs @ 100°C)	Requirements	Typical Results
Hardness Change, pts (ASTM D471-16a)	-5 to +5	+1 to +3
Tensile Change, % (ASTM D471-16a)	≤ -25	-4 to -3
Elongation Change, % (ASTM D471-16a)	≤ -45	-18 to -11
Volume Change, % (ASTM D471-16a)	-10 to +5	-4 to -2.2
IRM 903 Oil Resistance, EO34 (70 hrs @ 100°C)	Requirements	Typical Results
Hardness Change, pts (ASTM D471-16a)	-10 to +5	-3
Tensile Change, % (ASTM D471-16a)	≤ -45	-4 to +3
Elongation Change, % (ASTM D471-16a)	≤ -45	-25 to -12
Volume Change, % (ASTM D471-16a)	0 to +25	+5.2 to +8

Compound Previously Known As: N90101

Report Date: 9/12/2022

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.