
Compound N70101 Data Sheet

Material: Butadiene Acrylonitrile Copolymer (NBR)
Black, 70 Durometer, General Purpose

General Information:

Nitrile (Buna N, NBR) is one of the most common cost-effective sealing elastomers due to its resistance to petroleum-based fuels and lubricants. NBR has good mechanical properties when compared with other elastomers and high wear resistance. NBR is not resistant to weathering.

Cure System: *Sulfur-cured*

Sulfur-cured compounds provide better wear resistance, are more cost effective, provide higher ultimate elongation, and improve the ability to withstand repetitive bending.

Temperature Range: -35°C (-31°F) to 120°C (248°F)

Attributes:

Color: Black

Durometer Shore A: 70±5

Shelf-life: 15 years

General Purpose

Resistant to compression set

Resistant to tear/abrasion

Performs Well In:

Petroleum based oils & fuels
Aliphatic hydrocarbons
Vegetable oils
Silicone oils & greases
Ethylene glycol
Dilute acids
Water to below 100°C (212°F)

Doesn't Perform Well In:

Aromatic hydrocarbons
Automotive brake fluid
Chlorinated hydrocarbons
Ketones
Ethers
Esters
Phosphate ester hydraulic fluids
Strong acids
Ozone / weathering / sunlight

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Material Test Report

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Nitrile (Buna), Black, General Purpose

GENERAL		
Material:	Butadiene Acrylonitrile Copolymer (NBR)	
Durometer:	70	
Color:	Black	
Special Properties:		
ASTM* D2000 Callout:	M2BG714 A14 B14 EF11 EF21 EO14 EO34	
ORIGINAL PROPERTIES	ASTM D2000 REQUIREMENT	TYPICAL RESULTS
Hardness, Shore A, pts, ASTM D2240-15	70±5	70
Tensile Strength, psi, min, ASTM D412-16	2031 (min)	2547
Elongation, min, %, ASTM D412-16	250 (min)	288
Modulus @ 100%, psi, ASTM D412-16		816
Density, Mg/m ³ , CNS 5341-96, Method A		1.24
HEAT AGE, A14 (70 hrs. @ 100°C)	ASTM D2000 REQUIREMENT	TYPICAL RESULTS
Hardness Change, pts, Shore A, ASTM D573-04	±15	+5
Tensile Strength Change, %, ASTM D573-04	±30	+14
Elongation Change, %, ASTM D573-04	-50 (max)	-13
Weight Change, %		-1.1
COMPRESSION SET, B14 (22 hrs. @ 100°C)	ASTM D2000 REQUIREMENT	TYPICAL RESULTS
ASTM D395-18, Method B	25% (button)(max)	13.0
FUEL A RESISTANCE, EF11 (70 hrs. @ 23°C)	ASTM D2000 REQUIREMENT	TYPICAL RESULTS
Hardness Change, pts, Shore A, ASTM D471-16a	±10	-4
Tensile Strength Change, %, ASTM D471-16a	-25 (max)	-22
Elongation Change, %, ASTM D471-16a	-25 (max)	-8
Volume Change, %, ASTM D471-16a	-5~+10	+3
FUEL B RESISTANCE, EF21 (70 hrs. @ 23°C)	ASTM D2000 REQUIREMENT	TYPICAL RESULTS
Hardness Change, pts, Shore A, ASTM D471-16a	-30~0	-9
Tensile Strength Change, %, ASTM D471-16a	-60 (max)	-18
Elongation Change, %, ASTM D471-16a	-60 (max)	-21
Volume Change, %, ASTM D471-16a	0~+40	+12
IRM 901 OIL, EO14 (70 hrs. @ 100°C)	ASTM D2000 REQUIREMENT	TYPICAL RESULTS
Hardness Change, pts, Shore A, ASTM D471-16a	-5~+10	+3
Tensile Strength Change, %, ASTM D471-16a	-25 (max)	+6
Elongation Change, %, ASTM D471-16a	-45 (max)	-18
Volume Change, %, ASTM D471-16a	-10~+5	-4

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IRM 903 OIL, EO34 (70 hrs. @ 100°C)	ASTM D2000 REQUIREMENT	TYPICAL RESULTS
Hardness Change, pts, Shore A, ASTM D471-16a	-10~+5	-3
Tensile Strength Change, %, ASTM D471-16a	-45 (max)	+5
Elongation Change, %, ASTM D471-16a	-45 (max)	-20
Volume Change, %, ASTM D471-16a	0~+25	+10

*American Society for Testing and Materials

Report Date: 1/14/2022

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