
O-Ring Compound N70LT Data Sheet

Butadiene Acrylonitrile Copolymer 70
Durometer, Black

General Information:

Nitrile, Buna, or NBR is one of the most common sealing elastomers due to its resistance to petroleum-based fuels and lubricants. Nitrile elastomers are copolymers of acrylonitrile and butadiene.

Cure System: *Sulfur-cured* compounds show better low-temperature properties, however are more prone to hardening with high temperatures.

Temperature Range: -55°C (-67°F) – 100°C (212°F)

Attributes:

- Color: Black
- 70±5 Shore A durometer
- Shelf-life: 15 years

Industry Specifications Passed:

- ASTM D2000
- M5BG714
- A14
- B14
- EO14
- EO34
- F17

Performs Well In:

- Petroleum based oils and fuels
- Silicone oils and greases
- Vegetable oils
- Ethylene glycol
- Aliphatic hydrocarbons
- Diluted acids
- Water temperatures below 100°C (212°F)

Doesn't Perform Well In:

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

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TEST REPORT: COMPOUND N70LT

MATERIAL: BUTADIENE ACRYLONITRILE COPOLYMER

DUROMETER: 70

COLOR: BLACK

ASTM* D2000 M5BG714 A14 B14 E014 E034 F17 Z1

SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
	ORIGINAL PHYSICAL PROPERTIES			
	Hardness, Shore A	70±5	68	D2240-15
	Tensile Strength, psi (MPa)	2031 (14)(min.)	2509 (17.30)	D412-16
	Elongation, percent	250 (min.)	323	D412-16
	Modulus at 100%, psi (MPa)		609 (4.20)	D412-16
	Density (Mg/m ³)		1.21	CNC 5341-96A
A14	HEAT AGE			D573-04
	70 hours at 100°C			
	Hardness Change, pts	+/- 15	+6	
	Tensile Strength Change, %	-20(max)	+5	
	Elongation Change, %	-40(max)	-12	
B14	COMPRESSION SET			D395-16B
	22 hours at 100°C	25% (button)(max)	11.1	
E014	IRM 901 OIL			D471-16a
	70 hours at 100°C			
	Hardness Change, pts	-5 - 15	0	
	Tensile Strength Change, %	-25(max)	5	
	Elongation Change, %	-45(max)	-6	
E034	IRM 903 OIL			D471-16a
	70 hours at 100°C			
	Hardness Change, pts	-15 - 0	-14	
	Tensile Strength Change, %	-45(max)	-13	
	Elongation Change, %	-45(max)	-14	
F17	LOW TEMP BRITTLENESS POINT TEST			D2137-11C
	3 minute @ -40°C			
	Sample Type: T-50			
	Coolant Isopropyl alcohol			
Z1	LOW TEMP RETRACTION TEST (TR TEST)			D1329-16
	Testing Elongation 50%			
	Equipment of measure: thermocouple			
	Length of sample: 51 mm			
	Rate of Temperature: 1°C/min			
	Test Temperature: 26°C			
	Coolant : Methanol			
	TR10, °C	-40(max)	-55.4	

Approved By: Billy Sitz, Quality Engineer

Date: 04/17/2018

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