
Cord Compound N70CD Data Sheet

Material: Nitrile (Buna-N)

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*

Sulfur-cured compounds offer better low temperature properties but are more prone to hardening with high temperatures. Peroxide-cured nitriles have better heat resistance and lower compression sets but are more expensive and are more difficult to process.

Temperature Range: -40°C (-40°F) to 100°C (212°F)

Attributes:

Color: Black

Durometer Shore A: 70±5

Shelf-life: 15 years

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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TEST REPORT FOR CORD COMPOUND N70CD				
MATERIAL: NITRILE (BUNA-N)				
DUROMETER: 70				
COLOR: BLACK				
ASTM* D 2000-05 M5BG710A14B14C12EO14EO34F17				
SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
	ORIGINAL PHYSICAL PROPERTIES			
	Shore A Durometer	65-75	72	D2240
	Tensile Strength, min.	10.0 mPa 1450 psi	12.1 mPa 1755 psi	D412
	% Elongation, min.	250%	285%	D412
A14	OVEN AGED PROPERTIES			D573
	70 hours at 100°C (212°F)			
	Durometer Change, max.	+15	+5	
	Tensile Change, max.	-20%	+6.2%	
	Elongation Change, max.	-40%	-22.7%	
B14	% COMPRESSION SET, MAX.			D395 Method B
	22 hours at 100°C (212°F)	25%	17.1%	
F17	LOW TEMPERATURE			D2137 Method A
	3 minutes at -40°C (-40°F)	Must Not Crack	Passed	
C12	OZONE RESISTANCE			D1171 Method B
	100 hours at 38°C (104°F)			
	50 mPa (50 ppm) Ozone	Must Not Crack	Passed	
EO14	FLUID AGED PROPERTIES ASTM #1 OIL			D471
	70 hours at 100°C			
	Durometer Change, max.	-5 to +15	+4	
	Tensile Change, % max.	-25%	+8.1%	
	Elongation Change, % max.	-45%	-22.5%	
	% Volume Change, max.	-10% to +5%	-7.5%	
EO34	FLUID AGED PROPERTIES IRM 903 OIL (1)			D471
	70 hours at 100°C (212°F)			
	Durometer Change, max.	-15 to 0	-10	
	Tensile Change, % max.	-45%	-7.4%	
	Elongation Change, % max.	-45%	-16.3%	
	% Volume Change, max.	0 to +35%	+18.0%	

*American Society for Testing and Materials

*Note (1) - IRM 903 Oil is the ASTM approved replacement for #3 Oil