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Compound Technical Report Nitrile 70 (Buna N)

Nitrile (Buna N) is a general purpose copolymer of butadiene and acrylonitrile. Nitrile is exceptionally resistant to petroleum based oils and hydrocarbon fuels over a temp. range of -40° to +250° F.

ASTM Designation	D2000 Specification	Actual Result
Original properties		
Durometer, Shore A	70 ± 5	70
Tensile, psi (MPa), min.	2031 (14)	2476 (17)
Elongation, % min	250	385
Heat age, 70 hrs @ 100° C		
Durometer change, points	± 15	+ 1
Tensile strength change, % max	± 30	+ 4
Elongation change, % max	- 50	- 16
B14	Compression set, 22 hrs @ 100° C	
	Original deflection, % Max.	25
		16.7
EA14	Water Resistance, 70 hrs @ 100° C	
	Durometer change, points	± 10
	Volume change, %	± 15
		+ 2
		+ 6.2
EF11	Fluid A resistance, 70 hrs @ 23° C	
	Durometer change, points	± 10
	Tensile change, % max	- 25
	Elongation change, % max	- 25
	Volume change, %	-5 / +10
		+ 1
		- 6.3
		- 2.3
		+ 1.5
EF21	Fluid B resistance, 70 hrs @ 23° C	
	Durometer change, points	0 / -30
	Tensile change, % max	- 60
	Elongation change, % max	- 60
	Volume change, %	0 / +40
		- 7
		- 37.8
		- 26.2
		+ 21.1
EO14	ASTM #1 oil, 70 hrs @ 100° C	
	Durometer change, points	-5 / + 10
	Tensile change, % max	- 25
	Elongation change, % max	- 45
	Volume change, %	-10 / +5
		+ 2
		+ 3.2
		- 12.8
		- 3.7
E034	ASTM #3 oil, 70 hrs @ 100° C	
	Durometer change, points	-10 / +5
	Tensile change, % max	- 45
	Elongation change, % max	- 45
	Volume change, %	0 / +25
		- 5
		- 10
		- 11.4
		+ 7.8
F17	Low Temp. Brittleness, 3 min @ -40° C	
	ASTM D2137, Method A, 9.3.2	Non Brittle
		Pass

Specifications met: **ASTM D2000-99 Grade M2BG714 B14 EA14 EF11 EF21 EO14 EO34 F17**

Nitrile is Recommended for

General purpose sealing
Petroleum Oils and fluids
Di-ester based lubricants
Water
Silicone greases
Ethylene glycol

Nitrile is NOT Recommended for

Ozone
Halogenated hydrocarbons
Ketones
Phosphate ester based fluids
Automotive brake fluid
Nitro hydrocarbons