

BOYD

CORPORATION

TECHNICAL REPORT

N100-70 NITRILE COMPOUND

GENERAL PROPERTIES

The N100-70 Nitrile (BUNA-N) is a general purpose copolymer of butadiene and acrylonitrile. This compound has a relatively high acrylo content, making it exceptionally resistant to petroleum base oils and hydrocarbon fuels over a temperature range of -40F to +250F. This compound meets popular ASTM Specifications.

<u>ASTM Designation</u>	<u>ORIGINAL PROPERTIES</u>	<u>ASTM D2000 SPECIFICATION</u>	<u>LABORATORY PROPERTY</u>
	Durometer, Shore A	70+/-5	70
	Tensile, psi (MPa), Minimum	2031 (14)	2476 (17)
	Elongation, % Minimum	250	385
	Specific Gravity	-	1.24
	<u>HEAT AGE, 70 HRS @ 100 C</u>		
	Durometer Change, Points	+/- 15	+1
	Tensile Strength Change, % Maximum	+/- 30	+4
	Elongation Change, % Maximum	-50	-16
B14	<u>COMPRESSION SET, 22 HRS @ 100 C</u>		
	Original Deflection, % Maximum	25 (Button)	16.7
EA14	<u>WATER RESISTANCE, 70 HRS @ 100C</u>		
	Durometer Change, Points	+/-10	+2
	Volume Change, %	+/-15	+6.2
EF11	<u>FUEL A RESISTANCE, 70 HRS @ 23C</u>		
	Durometer Change, Points	+/-10	+1
	Tensile Change, % Maximum	-25	-6.3
	Elongation Change, % Maximum	-25	-2.3
	Volume Change, %	-5/+10	+1.5
EF21	<u>FUEL B RESISTANCE, 70 HRS @ 23C</u>		
	Durometer Change, Points	0/-30	-7
	Tensile Change, % Maximum	-60	-37.8
	Elongation Change, % Maximum	-60	-26.2
	Volume Change, % Maximum	0/+40	+21.1
EO14	<u>ASTM #1 OIL, 70 HRS @ 100C</u>		
	Durometer Change, Points	-5/+10	+2
	Tensile Change, % Maximum	-25	+3.2
	Elongation Change, % Maximum	-45	-12.8
	Volume Change, %	-10/+5	-3.7
EO34	<u>ASTM #3 OIL, 70 HRS @ 100C</u>		
	Durometer Change, Points	-10/+5	-5
	Tensile Change, % Maximum	-45	-10
	Elongation Change, % Maximum	-45	-11.4
	Volume Change, % Maximum	0/+25	+7.8
Z1	<u>LOW TEMPERATURE RETRACTION</u>		
	TR10, Degrees C	-	-31.9

SPECIFICATIONS MET

ASTM D2000-99 Grade M2BG714 B14 EA14 EF11 EF21 EO14 EO34 Z1=TR10

MANUFACTURER'S CROSS REFERENCE

N100-70 is designed to meet or exceed the properties of these popular Nitrile Compounds: N674-70, 7507, B46-70, 4200-70, H14327, 4700-70 and 366Y