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**Compound N75GR12 Data Sheet**  
Material: Nitrile (NBR) Metal Detectable  
75 Durometer, Green

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**General Information:**

Metal Detectable O-Rings perform similarly to conventional elastomer o-rings with regards to tolerance for high and low temperatures, mechanical stress, and resistance to corrosive chemicals. They are typically used with detection equipment to identify contamination. Nitrile rubber, also known as Buna, is one of the most commonly used sealing elastomers due to its resistance to petroleum-based fuels and lubricants and its relatively low price.

**Cure System:** *Sulfur-cured*

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

**Attributes:**

Color: Green

Durometer Shore A: 75±5

Shelf-life: 15 years

**Performs Well In:**

- Petroleum based oils and fuels
- Aliphatic hydrocarbons
- Vegetable oils
- Silicone oils and 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 O-RING COMPOUND N75GR12

MATERIAL: BUNA FDA GREEN, METAL DETECTABLE

DUROMETER: 75

COLOR: GREEN

ASTM\* D2000 M2BG710 A14 EO14 EA14 EF11 EF21 B14 Z:HD75+/-5

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SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
	<b>ORIGINAL PHYSICAL PROPERTIES</b>			
	Durometer Hardness(1 sec) Shore A	75±5	78	D2240
	International Hardness, point		78	D1415
	Tensile Strength, psi, Die C	1450	2115	D412
	Elongation at Break, %, Die C	250	444	D412
	Tear Resistance, kgf/cm, Die C		58	D624
	Modulus at 100%, psi, Die C		699	D412
	Modulus at 200%, psi, Die C		1290	D412
	Modulus at 300%, psi, Die C		1741	D412
	Specific Gravity		1.536	
	Shrinkage rate, %		-2	
A14	<b>HEAT RESISTANCE</b>			
	<b>70 hours at 100°C</b>			
	Hardness Change, points	±15	1	
	Tensile Strength Change, percent	±30	0	
	Elongation Change, percent	-50(max)	-8	
	Volume Change, percent		-0.4	
EO14	<b>FLUID RESISTANCE IRM901</b>			
	<b>70 hours at 100°C</b>			
	Hardness Change, points	-5 to +10	1	
	Tensile Strength Change, percent	-25	2	
	Elongation Change, percent	-45	-11	
	Volume Change, percent	-10 to +5	-1.2	
	<b>FLUID RESISTANCE IRM903</b>			
	<b>70 hours at 100°C</b>			
	Hardness Change, points		-8	
	Tensile Strength Change, percent		-7	
	Elongation Change, percent		-10	
	Volume Change, percent		9.3	
EA14	<b>FLUID RESISTANCE WATER</b>			
	<b>70 hours @ 100°C</b>			
	Hardness Change, points	±10	-6	
	Tensile Change, max, percent		-5	
	Elongation Change, max, percent		16	
	Volume Change, percent	±15	9	

EF11	<b>FLUID RESISTANCE FUEL A ISO-OCTANE</b>			
	<b>70 hours @ 23°C</b>			
	Hardness Change, points	±10	-6	
	Tensile Change, max, percent	-25	-13	
	Elongation Change, max, percent	-25	2	
	Volume Change, percent	-5 to +10	5.2	
EF21	<b>FLUID RESISTANCE FUEL B 70% ISO-OCTANE+30% TOLUENE</b>			
	<b>70 hours @ 23°C</b>			
	Hardness Change, points	-30	-24	
	Tensile Change, max, percent	-60	-49	
	Elongation Change, max, percent	-60	-40	
	Volume Change, percent	+40	29.6	
B14	<b>COMPRESSION SET</b>			
	<b>100°C at 22h, %, Max</b>		12.1	D395 Meth. B
	<b>125°C at 22h, %, Max</b>		28.2	D395
	<b>100°C at 22h, %, Max</b>		20.3	D395
	<b>100°C at 70h, %, Max</b>		33.8	D395
	<b>D1329-TR10, 51mm die, 50% elongation, retraction 10% min, °C</b>	-24.4		D1329
	<b>D2137-0001 3 hrs, min, °C</b>	-20		D2137

\*American Society for Testing and Materials