GLOBAL O-RING and SEAL
ALL-AROUND BETTER

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Compound N70MD Data Sheet

Nitrile (NBR) Metal Detectable & X-ray Detectable
70 Durometer, Blue

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: Blue
▪70±5 Shore A durometer
▪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 N70MD

MATERIAL: BUNA METAL DETECTABLE & X-RAY DETECTABLE
DUROMETER: 70
COLOR: BLUE
ASTM* D2000 M2BG708A14EA14EF11EO14

SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
	ORIGINAL PHYSICAL PROPERTIES			
	Hardness, Type A	70±5	70	D2240
	Tensile Strength, Psi, Min	1160	1812	D412
	Elongation, percent , Min	200	668	D412
	Tear Resistance, Kgf/cm (Die C)		43	D624
	Modulus at 100%, Psi		338	D412
	Modulus at 200%, Psi		577	D412
	Modulus at 300%, Psi		841	D412
	Specific Gravity		1.58	
A14	**HEAT RESISTANCE**			D573
	70 hours at 100°C			
	Hardness Change, points, Max	±15	+2	
	Tensile Strength Change, percent, Max	±30	-4	
	Elongation Change, percent, Max	-50	-1	
	Volume Change, percent		-0.8	
A	**HEAT RESISTANCE**			D573
	hours at °C			
	Hardness Change, points, Max			
	Tensile Strength Change, percent, Max			
	Elongation Change, percent, Max			
	Volume Change, percent			
EA14	**WATER RESISTANCE**			D471
	70 hours at 100°C			
	Hardness Change, points, Max	±10	-6	
	Tensile Strength Change, percent, Max		-9	
	Elongation Change, percent, Max		-7	
	Volume Change, percent	±15	+10.1	
EO14	**FLUID RESISTANCE, IRM901 OIL**			D471
	70 hours at 100°C			
	Hardness Change, points, Max	-5~+10	+3	
	Tensile Strength Change, percent, Max	-25	-1	
	Elongation Change, percent, Max	-45	-7	
	Volume Change, percent	-10~+5	-2.9	
EO	**FLUID RESISTANCE, IRM903 OIL**			D471
	70 hours at 100°C			
	Hardness Change, points, Max		-9	
	Tensile Strength Change, percent, Max		-28	
	Elongation Change, percent, Max		-34	
	Volume Change, percent		+9.8	

N70MD

TEST REPORT FOR O-RING COMPOUND N70MD

MATERIAL: BUNA METAL DETECTABLE
DUROMETER: 70
COLOR: BLUE
ASTM* D2000 M2BG708A14EA14EF11EO14

SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
EF11	**FLUID RESISTANCE, REFERENCE FUEL A**			D471
	70 hours at 23°C			
	Hardness Change, points, Max	±10	-6	
	Tensile Strength Change, percent, Max	-25	-12	
	Elongation Change, percent, Max	-25	-3	
EF	**FLUID RESISTANCE, REFERENCE FUEL B**			D471
	70 hours at 23°C			
	Hardness Change, points, Max		-28	
	Tensile Strength Change, percent, Max		-48	
	Elongation Change, percent, Max		-35	
	Volume Change, percent		+34.7	
B	**COMPRESSION SET, METHOD B**			D395
	22 hours at 100°C			
	Percent, Max	Button	26	
B	**COMPRESSION SET, METHOD B**			D395
	hours at °C			
	Percent, Max			
B	**COMPRESSION SET, METHOD B**			D395
	hours at °C			
	Percent, Max			

*American Society for Testing and Materials

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