



# MATERIAL DATA SHEET

Global O-Ring and Seal, LLC

COMPOUND	N90-B102	MATERIAL	NBR
DUROMETER	90 Shore A	COLOR	Black
DESIGNATION	Low Temp	REPORT DATE	2020-11-16
TEMP RANGE	-54°C (-65°F) to 149°C (300°F)	CURE SYSTEM	Sulfur
SPECIFICATION	ASTM D2000 M6BG910 A14 B14 B34 EO14 EO34 F19 Z1 Z2		

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness (Shore A)	D2240-15 <sup>E1</sup>	-	Shore A	87	90 ±5
Tensile Strength	D412-16	-	MPa (PSI)	14.7 (2,138)	10 (1,450) min
Elongation at Break	D412-16	-	%	148	100 min
100% Modulus	D412-16	-	MPa (PSI)	10.8 (1,565)	-
Density	CNS 5341-96, Method A	-	Mg/m <sup>3</sup>	1.29	-

## A14 – HEAT RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D573-04	70 Hrs @ 100°C (212°F)	points	3	±15
Tensile Strength Change	D573-04	70 Hrs @ 100°C (212°F)	%	-11	-20 max
Elongation Change	D573-04	70 Hrs @ 100°C (212°F)	%	-22	-40 max
Weight Change	D573-04	70 Hrs @ 100°C (212°F)	%	-0.1	-

## B14 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-18, Method B	22 Hrs @ 100°C (212°F) (button)	%	10.3	-

## B34 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-18, Method B	22 Hrs @ 100°C (212°F) (plied)	%	22.8	25 max

## EO14 – FLUID RESISTANCE, IRM 901 OIL

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 100°C (212°F)	points	0	-5 to 15
Tensile Strength Change	D471-16a	70 Hrs @ 100°C (212°F)	%	-9	-25 max

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Elongation Change	D471-16a	70 Hrs @ 100°C (212°F)	%	-20	-45 max
Volume Change	D471-16a	70 Hrs @ 100°C (212°F)	%	1.8	-10 to 5

### EO34 – FLUID RESISTANCE, IRM 903 OIL

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 100°C (212°F)	points	-18	-20 to 0
Tensile Strength Change	D471-16a	70 Hrs @ 100°C (212°F)	%	-7	-45 max
Elongation Change	D471-16a	70 Hrs @ 100°C (212°F)	%	-20	-45 max
Volume Change	D471-16a	70 Hrs @ 100°C (212°F)	%	27.9	0 to 35

### F19 – LOW-TEMPERATURE RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Low Temperature Brittleness	D2137-11,Method A	3 minute @ -55°C (-67°F)	-	pass	pass

### Z1 – LOW TEMPERATURE RETRACTION TEST (TR TEST )

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
TR10, °C	D1329-08	-	-	-46.3	-

### ADDITIONAL APPROVALS

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Data shown is based on supplier testing of compound slabs/buttons and is provided for general reference only.