MATERIAL DATA SHEET

Global O-Ring and Seal, LLC

COMPOUND	N80-B102	**MATERIAL**	NBR
DUROMETER	80 Shore A	**COLOR**	Black
DESIGNATION	UL157	**REPORT DATE**	2021-11-05
TEMP RANGE	-40°C (-40°F) to 100°C (212°F)	**CURE SYSTEM**	Sulfur
SPECIFICATION	ASTM D2000 M7BG814 A14 B14 EA14 EF11 EF21 EO14 EO34 F16 Z1 Z2		

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness (Shore A)	D2240-15$^{\varepsilon 1}$	–	Shore A	**81**	80 ±5
Tensile Strength	D412-16$^{\varepsilon 1}$	–	MPa (PSI)	**18.3 (2,657)**	14 (2,031) min
Elongation at Break	D412-16$^{\varepsilon 1}$	–	%	**203**	125 min
100% Modulus	D412-16$^{\varepsilon 1}$	–	MPa (PSI)	**9.93 (1,440)**	–
Density	CNS 5341-96, Method A	–	Mg/m^3	**1.28**	–

A14 – HEAT RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D573-04	70 Hrs @ 100°C (212°F)	points	**4**	±15
Tensile Strength Change	D573-04	70 Hrs @ 100°C (212°F)	%	**2**	±30
Elongation Change	D573-04	70 Hrs @ 100°C (212°F)	%	**-17**	-50 max
Weight Change	D573-04	70 Hrs @ 100°C (212°F)	%	**-0.2**	–

B14 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-18, Method B	22 Hrs @ 100°C (212°F)	%	**11.9**	–

EA14 – FLUID RESISTANCE, WATER RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 100°C (212°F)	points	**1**	±10
Tensile Strength Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**5**	–
Elongation Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**-22**	–
Volume Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**5.3**	±15

EF11 – FLUID RESISTANCE, ASTM FUEL A RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 23°C (73°F)	points	**-2**	±10
Tensile Strength Change	D471-16a	70 Hrs @ 23°C (73°F)	%	**-6**	-25 max
Elongation Change	D471-16a	70 Hrs @ 23°C (73°F)	%	**-6**	-25 max
Volume Change	D471-16a	70 Hrs @ 23°C (73°F)	%	**3.1**	-5 to 10

EF21 – FLUID RESISTANCE, ASTM FUEL B RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 23°C (73°F)	points	**-13**	-30 to 0
Tensile Strength Change	D471-16a	70 Hrs @ 23°C (73°F)	%	**-23**	-60 max
Elongation Change	D471-16a	70 Hrs @ 23°C (73°F)	%	**-26**	-60 max
Volume Change	D471-16a	70 Hrs @ 23°C (73°F)	%	**26.7**	0 to 40

EO14 – FLUID RESISTANCE, IRM 901 OIL

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 100°C (212°F)	points	**2**	±5
Tensile Strength Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**1**	-25 max
Elongation Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**-18**	-45 max
Volume Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**-3.9**	-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	**-7**	-10 to 5
Tensile Strength Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**-34**	-45 max
Elongation Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**-19**	-45 max
Volume Change	D471-16a	70 Hrs @ 100°C (212°F)	%	**7.3**	0 to 25

F16 – LOW-TEMPERATURE RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Low Temperature Brittleness	D2137-11, Method C	3 minute @ -35°C (-31°F)	–	**pass**	pass

ADDITIONAL APPROVALS

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