MATERIAL DATA SHEET

Global O-Ring and Seal, LLC

COMPOUND	H90-B103	**MATERIAL**	HNBR
DUROMETER	90 Shore A	**COLOR**	Black
DESIGNATION	RGD, Low Temp	**REPORT DATE**	2020-06-04
TEMP RANGE	-55°C (-67°F) to 150°C (302°F)	**CURE SYSTEM**	–
SPECIFICATION	ASTM D2000 M2DH920 A26 B16 B36 EO16 F19 Z1		

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness (Shore A)	D2240-15$^{\varepsilon 1}$	–	Shore A	**88**	90 ±5
Tensile Strength	D412-16	–	MPa (PSI)	**22.9 (3,327)**	20 (2,899) min
Elongation at Break	D412-16	–	%	**102**	100 min
100% Modulus	D412-16	–	MPa (PSI)	**22.4 (3,250)**	–
Density	CNS 5341-96,Method A	–	Mg/m^3	**1.34**	–

A26 – HEAT RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D865-11	70 Hrs @ 150°C (302°F)	points	**4**	10 max
Tensile Strength Change	D865-11	70 Hrs @ 150°C (302°F)	%	**6**	-25 max
Elongation Change	D865-11	70 Hrs @ 150°C (302°F)	%	**-13**	-30 max
Weight Change	D865-11	70 Hrs @ 150°C (302°F)	%	**0.8**	–

B16 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-16$^{\varepsilon 1}$,Method B	22 Hrs @ 150°C (302°F)	%	**19.5**	–

B36 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-16$^{\varepsilon 1}$,Method B	22 Hrs @ 150°C (302°F) (plied)	%	**29.4**	50 max

EO16 – FLUID RESISTANCE, IRM 901 OIL

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 150°C (302°F)	points	**-3**	-5 to 10
Tensile Strength Change	D471-16a	70 Hrs @ 150°C (302°F)	%	**-9**	-20 max

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Elongation Change	D471-16a	70 Hrs @ 150°C (302°F)	%	**-22**	-30 max
Volume Change	D471-16a	70 Hrs @ 150°C (302°F)	%	**3.3**	±5

F19 – LOW-TEMPERATURE RESISTANCE

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

Z1 – IRM 903 OIL

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-16a	70 Hrs @ 150°C (302°F)	points	**-17**	–
Tensile Strength Change	D471-16a	70 Hrs @ 150°C (302°F)	%	**-18**	–
Elongation Change	D471-16a	70 Hrs @ 150°C (302°F)	%	**-20**	–
Volume Change	D471-16a	70 Hrs @ 150°C (302°F)	%	**26.9**	–

ADDITIONAL APPROVALS

NORSOK M-710

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