



MATERIAL DATA SHEET

Global O-Ring and Seal, LLC

COMPOUND	V90-B102	MATERIAL	FKM
DUROMETER	90 Shore A	COLOR	Black
DESIGNATION	RGD, General Purpose	REPORT DATE	2026-04-05
TEMP RANGE	-25°C (-13°F) to 250°C (482°F)	CURE SYSTEM	Bisphenol
SPECIFICATION	ASTM D2000 M2HK910 A1-10 B37 B38 EF31 Z1 Z2 Z3		

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness (Shore A)	D2240-05	-	Shore A	91	90 ±5
Tensile Strength	D412-06a	-	MPa (PSI)	16.3 (2,366)	10 (1,450) min
Elongation at Break	D412-06a	-	%	169	100 min
100% Modulus	D412-06a	-	MPa (PSI)	9.97 (1,446)	-
Density	CNS 5341-96, Method A	-	Mg/m ³	1.87	-

A1-10 – HEAT RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D573-04	70 Hrs @ 250°C (482°F)	points	2	10 max
Tensile Strength Change	D573-04	70 Hrs @ 250°C (482°F)	%	-10	-25 max
Elongation Change	D573-04	70 Hrs @ 250°C (482°F)	%	11	-25 max
Weight Change	D573-04	70 Hrs @ 250°C (482°F)	%	-1.3	-

B37 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-03, Method B	22 Hrs @ 175°C (347°F) (plied)	%	33.5	50 max

B38 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-03, Method B	22 Hrs @ 200°C (392°F) (plied)	%	36.1	50 max

EF31 – FLUID RESISTANCE, ASTM FUEL C RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-12a	70 Hrs @ 23°C (73°F)	points	-2	±5
Tensile Strength Change	D471-12a	70 Hrs @ 23°C (73°F)	%	-4	-25 max

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Elongation Change	D471-12a	70 Hrs @ 23°C (73°F)	%	8	-20 max
Volume Change	D471-12a	70 Hrs @ 23°C (73°F)	%	1.6	0 to 10

Z2 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-03, Method B	70 Hrs @ 200°C (392°F)	%	38.7	–

Z3 – LOW TEMPERATURE RETRACTION TEST (TR TEST)

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
TR10, °C	D1329-08	–	–	-14.4	–

ADDITIONAL APPROVALS

NORSOK M-710, Total GS EP PVV 142, API 6A

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