



# MATERIAL DATA SHEET

Global O-Ring and Seal, LLC

COMPOUND	V90-B101	MATERIAL	FKM
DUROMETER	90 Shore A	COLOR	Black
DESIGNATION	General Purpose	REPORT DATE	2016-03-07
TEMP RANGE	-25°C (-13°F) to 250°C (482°F)	CURE SYSTEM	Bisphenol
SPECIFICATION	ASTM D2000 M2HK910 A1-10 B38 EF31 EO78 EO88 Z1		

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness (Shore A)	D2240-05	-	Shore A	90.5	90 ±5
Tensile Strength	D412-06a	-	MPa (PSI)	14.6 (2,118)	10 (1,450) min
Elongation at Break	D412-06a	-	%	131	100 min
100% Modulus	D412-06a	-	MPa (PSI)	12.2 (1,771)	-
Specific Gravity	D297	-	Mg/m <sup>3</sup>	1.84	-

## A1-10 – HEAT RESISTANCE

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D573-04	70 Hrs @ 250°C (482°F)	points	3	10 max
Tensile Strength Change	D573-04	70 Hrs @ 250°C (482°F)	%	1	-25 max
Elongation Change	D573-04	70 Hrs @ 250°C (482°F)	%	-7	-25 max
Weight Change	D573-04	70 Hrs @ 250°C (482°F)	%	-1.6	-

## B38 – COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Compression Set	D395-03, Method B	22 Hrs @ 200°C (392°F) (plied)	%	17.7	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)	%	-5	-25 max
Elongation Change	D471-12a	70 Hrs @ 23°C (73°F)	%	2	-20 max
Volume Change	D471-12a	70 Hrs @ 23°C (73°F)	%	2.5	0 to 10

**E078 – FLUID RESISTANCE, ASTM NO.101 OIL**

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-12a	70 Hrs @ 200°C (392°F)	points	-7	-15 to 5
Tensile Strength Change	D471-12a	70 Hrs @ 200°C (392°F)	%	-5	-40 max
Elongation Change	D471-12a	70 Hrs @ 200°C (392°F)	%	14	-20 max
Volume Change	D471-12a	70 Hrs @ 200°C (392°F)	%	8.7	0 to 15

**E088 – FLUID RESISTANCE, HATCO 7700 OIL**

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change	D471-12a	70 Hrs @ 200°C (392°F)	points	-10	-15 to 5
Tensile Strength Change	D471-12a	70 Hrs @ 200°C (392°F)	%	-10	-40 max
Elongation Change	D471-12a	70 Hrs @ 200°C (392°F)	%	-2	-20 max
Volume Change	D471-12a	70 Hrs @ 200°C (392°F)	%	12.7	25 max

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

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
TR10, °C	D1329-08	-	-	-17.2	-

**ADDITIONAL APPROVALS**

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