



# MATERIAL DATA SHEET

Global O-Ring and Seal, LLC

COMPOUND	V90-B103	MATERIAL	FKM
DUROMETER	90 Shore A	COLOR	Black
DESIGNATION	John Deere JDM	REPORT DATE	2026-04-05
TEMP RANGE	-25°C (-13°F) to 250°C (482°F)	CURE SYSTEM	Bisphenol
SPECIFICATION	-		

## PHYSICAL PROPERTIES – 200 °C (392 °F)

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change, (IRHD).	D2240	70 Hrs @ 200°C (392°F) (ASTM D865-11) (O-ring C/S=3.53mm)	points	0	0 to 5

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness, (IRHD)	D1415-18	-	Shore A	90.6	83 to 97

## COMPRESSION SET

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
O-Ring Compression Set, 70 Hrs @ 200°C	D1414-15	70 Hrs @ 200°C (392°F)	%	24.9	-
Compression Set	D1414-15	70 Hrs @ 200°C (392°F)	%	22.4	-
Compression Set	D1414-15	70 Hrs @ 200°C (392°F)	%	24.8	-
Compression Set	D1414-15	70 Hrs @ 200°C (392°F)	%	20.9	-
Compression Set	D1414-15	70 Hrs @ 200°C (392°F)	%	20	-
O-Ring Compression Set, 1000 Hrs @ 200°C	D1414-15	1000 Hrs @ 200°C (392°F)	%	64.2	-
Compression Set	D1414-15	1000 Hrs @ 200°C (392°F)	%	63.8	-
Compression Set	D1414-15	1000 Hrs @ 200°C (392°F)	%	61.6	-
Compression Set	D1414-15	1000 Hrs @ 200°C (392°F)	%	59.2	-
Compression Set	D1414-15	1000 Hrs @ 200°C (392°F)	%	59.7	-

## FLUID RESISTANCE – O-RING IRM901 OIL

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Hardness Change, (IRHD).	D2240	70 Hrs @ 200°C (392°F) (ASTM D471-16a) (O-ring C/S=3.53mm)	points	-1	±5

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
Volume Change	-	70 Hrs @ 200°C (392°F) (ASTM D471-16a) (O-ring C/S=3.53mm)	%	0.2	0 to 4

**LOW TEMPERATURE – LOW TEMPERATURE RETRACTION TEST**

PROPERTY	TEST METHOD	CONDITION	UNITS	RESULT	REQUIREMENT
TR10, °C	-	-	-	-17.7	-15 max

**ADDITIONAL APPROVALS**

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