

# The O-Ring Store LLC



We make getting o-rings easy!

## **URETHANE 90 DUROMETER DATA SHEET FOR COMPOUND U90**

### **Compound Features:**

- Translucent in color.
- Excellent wear and abrasion resistance.
- Excellent tear resistance.
- Excellent wear resistance.
- Excellent short term resilience.
- Excellent low temperature flexibility.
- Good elongation resistance.

### **Compound Limitations:**

- Poor compression set resistance.
- Poor resistance to acids.
- Poor resistance to chlorinated hydrocarbons.
- Poor resistance to brake fluids.
- Poor resistance to ketones (MEK).

### **Temperature Range:**

-40°F to +180°F (-40°C to +82.2°C)

### **ASTM Callout:**

ASTM D2000 M3 BG910 B14 EO14 F19

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ORIGINAL PROPERTIES					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Durometer	-	-	Shore A	90± 5	89
Tensile Strength		-	MPa	1450	2984
Elongation Resistance		-	%	100	200
Tear Resistance		-	Kh-cm	-	59
Modulus @ 100%		D412	PSI	-	1483
Specific Gravity		-	-	-	1.218

HEAT RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Durometer Change	-	70 Hours @ 70°C	Shore A	-	+2
Tensile Strength Change			%	-	-7
Elongation Resistance Change			%	-	-9
Volume Change			%	-	0

HEAT RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Durometer Change	-	100 Hours @ 70°C	Shore A	-	0
Tensile Strength Change			%	-	-9
Elongation Resistance Change			%	-	-10
Volume Change			%	-	-0.8

LOW TEMPERATURE RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Brittleness	F19	3 Min @ -55°C	Pass/Fail	Non-Brittle	Pass

FLUID RESISTANCE – WATER					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Durometer Change	-	70 Hours @ 100°C	Shore A	-	0
Tensile Strength Change			%	-	-7
Elongation Resistance Change			%	-	+9
Change in Volume			%	-	+2.6

Information within is believed to be accurate and reliable. However, The O-Ring Store, LLC makes no warranty, expressed or implied, that parts supplied in this material will perform satisfactorily in specific applications. It's the customer's responsibility to evaluate the material prior to use.

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OIL RESISTANCE – IRM 901 OIL					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Durometer Change	EO14	ASTM D471 70 Hours @ 100°C	Shore A	-7 to +5	-1
Tensile Strength Change			%	-20 Max	-10
Elongation Resistance Change			%	-40 Max	+1
Change in Volume			%	-5 to +10	+2.7
OIL RESISTANCE – IRM 903 OIL					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Durometer Change	-	ASTM D471 70 Hours @ 100°C	Shore A	-	-14
Tensile Strength Change			%	-	-35
Elongation Resistance Change			%	-	-22
Change in Volume			%	-	+33.7
COMPRESSION SET					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	U90 Compound Property
Original Deflection (Button)	-	ASTM D395 B 22 Hours @ 70°C	%	-	20
Original Deflection	B14	ASTM D395 B 22 Hours @ 100°C	%	50 Max	34

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