The O-Ring Store LLC

We make getting o-rings easy!

BUNA-N 90 DUROMETER
DATA SHEET FOR COMPOUND B90

Compound Features:

- 90 durometer for high pressure applications.
- Relatively high acrylo content.
- Excellent resistance to petroleum products.
- Excellent water resistance.
- Resistance to ethylene glycol fluids.
- Works well with silicone grease or oil lubricants.
- Good low temperature flexibility.
- Good abrasion and wear resistance.
- Good compression set.
- Good Permeation resilience.

Compound Limitations:

- Poor resistance to UV/sunlight, ozone, and weathering.
- Halogenated hydrocarbons.
- Poor resistance to ketones (MEK) and other strong solvents.
- Poor resistance to strong acids.
- Poor resistance to automotive and aircraft brake fluids.

Temperature Range:

-40°F to +250°F (-40°C to +121°C)

ASTM Callout:

ASTM D2000-01 Grade M7BG910 B14 EA14 EF11 EF21 EO14 EO34 F16
ASTM D2000-75 Grade 7BG915 B14 E14 E34 E51 E61 F16 L14

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ORIGINAL PROPERTIES					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Durometer	-	-	Shore A	90± 5	91
Tensile Strength			PSI (MPa)	1450 (10) Min.	2270 (15.7)
Elongation Resistance			%	100 Min.	125
Specific Gravity			-	-	1.38

HEAT AGE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Durometer Change	-	70 Hours @ 100°C	Shore A	±15	+4
Tensile Strength Change			%	±30	-6
Elongation Resistance Change			%	-50	-22

COMPRESSION SET					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Original Deflection	B14	22 Hours @ 100°C	%	25 Max	19.8

WATER RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Durometer Change	EA14	70 Hours @ 100°C	Shore A	±10	+1
Volume Change			%	±15	+4.4

FUEL A RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Durometer Change	EF11	70 Hours @ 23°C	Shore A	±10	0
Tensile Strength Change			%	-25	-2.4
Elongation Resistance Change			%	-25	-3.1
Volume Change			%	-5 to +10	+0.5

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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FUEL B RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Durometer Change	EF21	70 Hours @ 23°C	Shore A	0 to -30	-15
Tensile Strength Change			%	-60	-19.9
Elongation Resistance Change			%	-60	-37.3
Volume Change			%	-0 to +40	+19.6

ASTM #1 OIL RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Durometer Change	E014	70 Hours @100°C	Shore A	-5 to +15	+1
Tensile Strength Change			%	-25	+3.1
Elongation Resistance Change			%	-45	-16.7
Volume Change			%	-10 to +5	-1.5

ASTM #3 OIL RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
Durometer Change	EO34	70 Hours @ 100°C	Shore A	-10 to +5	-4
Tensile Strength Change			%	-45	-2
Elongation Resistance Change			%	-45	-13.2
Volume Change			%	0 to +25	+11.7

LOW TEMPERATURE BRITTLENESS					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	B90 Compound Property
ASTM D2137	F16	3 Minutes@ -35°C Method A, 9.3.2	Pass/Fail	Non-Brittle	Pass

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