

The O-Ring Store LLC

We make getting o-rings easy!

DATA SHEET FOR COMPOUND B70 : BUNA-N 70 DUROMETER

Buna-N O-Rings are the most widely used o-ring material in the world because of low cost, good mechanical performance with resistance to water, most basic oils, lubricants and some fuels, many pneumatic, hydraulic systems, propane, natural gas and the default choice for basic applications. Buna-N o-rings are not recommended for exposure to sunlight, UV light, ozone and general outdoor weathering or harsh chemicals, acids, ketones and many others.

COMPOUND FEATURES

- Relatively high acrylo content.
- Excellent resistance to petroleum products.
- Excellent water resistance.
- Resistance to ethylene glycol fluids. 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 D2000-99 Grade M2BG714 B14 EA14 EF11 EF21 EO14 EO34 Z1=TR10=-31.9C

RECOMMENDED SHELF LIFE:

15 Years

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ORIGINAL PROPERTIES

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
DUROMETER	-	-	SHORE A	70 ± 5	70
TENSILE STRENGTH			PSI (MPA)	2031 (14) MIN.	2476 (17)
ELONGATION RESISTANCE			%	250 MIN.	385
SPECIFIC GRAVITY			-	-	1.24

HEAT AGE

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
DUROMETER CHANGE	-	70 HOURS @ 150° C	SHORE A	±15	+1
TENSILE STRENGTH CHANGE			%	±30	+4
ELONGATION RESISTANCE CHANGE			%	-50	-16

COMPRESSION SET

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
ORIGINAL DEFLECTION	B14	70 HOURS @ 100° C	%	25 MAX	16.7

WATER RESISTANCE

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
DUROMETER CHANGE	EA14	70 HOURS @ 100° C	SHORE A	±10	+2
CHANGE IN VOLUME			%	±15	+6.2

FUEL A RESISTANCE

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
DUROMETER CHANGE	EF11	70 HOURS @ 23° C	SHORE A	±10	+1
TENSILE STRENGTH CHANGE			%	-25	-6.3
ELONGATION RESISTANCE CHANGE			%	-25	-2.3
CHANGE IN VOLUME			%	5 TO +10	+1.5

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	B70 COMPOUND PROPERTY
DUROMETER CHANGE	EF21	70 HOURS @ 23° C	SHORE A	0 TO -30	-7
TENSILE STRENGTH CHANGE			%	-60	-37.8
ELONGATION RESISTANCE CHANGE			%	-60	-26.2
CHANGE IN VOLUME			%	-0 TO +40	+21.1

ASTM #1 OIL RESISTANCE

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
DUROMETER CHANGE	EO14	70 HOURS @ 23° C	SHORE A	-5 to +15	+2
TENSILE STRENGTH CHANGE			%	-25	+3.2
ELONGATION RESISTANCE CHANGE			%	-45	-12.8
CHANGE IN VOLUME			%	-10 to +5	-3.7

ASTM #3 OIL RESISTANCE

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
DUROMETER CHANGE	EO34	70 HOURS @ 23° C	SHORE A	-10 TO +5	-5
TENSILE STRENGTH CHANGE			%	-45	-10
ELONGATION RESISTANCE CHANGE			%	-45	-11.4
CHANGE IN VOLUME			%	0 TO +25	+7.8

LOW TEMPERATURE RETRACTION

PROPERTIES	ASTM DESIGNATION	TEST METHOD	UNIT OF MEASURE	ASTM D2000 SPECIFICATION	B70 COMPOUND PROPERTY
DUROMETER CHANGE	Z1	TR10	°C	-	-31.9

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