



Marco Compound # B1105
70 Durometer, Black, Metal Detectable, FDA Compliant Buna-N
Technical Datasheet

Common Names:

NBR (acrylonitrile butadiene rubber), **Buna-N**, **Nitrile**.

General Description:

Most commonly used general purpose o-ring material because of relative low cost, good mechanical properties, and basic resistance to many common lubricants. Specific physical and chemical resistances vary by compound formulation. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:

- FDA Compliant
- Metal Detectable
- Good/Excellent resistance to compression set and tear/abrasion.
- Good/Excellent resistance to many petroleum oils/greases, hydraulic fluids, alcohol, ambient water, silicone greases, Di-ester base lubricants and ethylene-glycol based fluids.

Limitations:

- Ozone, direct sunlight, UV, weathering, aromatic fuels, glycol-based brake fluids, polar solvents, non-flammable hydraulic fluids (HFD), aromatic/chlorinated hydrocarbons, ketones, esters, and aldehydes, 15 year shelf life.

Cure System:

Sulfur

(Peroxide cured CPDs available with improved physical, chemical, and thermal properties)

Service Temperature:

-30 to 250° F

Specification:

ASTM 2000 M2BG710 A14 B14 EA14 EO14 EO34 Z1 Z2

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	67
Color	Black	Black
Tensile Strength, psi	1,450	1,780
Ultimate Elongation, %	250	318

This information is to the best of our knowledge accurate and reliable. However, Marco Rubber makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It's the customer's responsibility to evaluate parts prior to use.

HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	+/- 15	+4
Tensile Strength Change, %	+/- 20	+5
Ultimate Elongation Change, %	-40	-28

COMPRESSION SET – B14, ASTM D 325 Method B (22 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set %	25	22

FLUID RESISTANCE, Water – EA14, ASTM D 471 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	+/- 10	0
Volume Change, %	+/- 15	2

FLUID RESISTANCE –ASTM #1 Oil – EO14, ASTM D 471 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-5 to +10	+8
Tensile Strength Change, %	-25	+11
Ultimate Elongation Change, %	-45	-27
Volume Change, %	-10 to +5	-4

FLUID RESISTANCE – IRM 903 Oil, -EO34, ASTM D 471 (70 hrs. @ 73°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-10 to +5	-4
Tensile Strength Change, %	-45	+3
Ultimate Elongation Change, %	-45	-28
Volume Change, %	0 to +25	+8

Z1 Low Temperature Resistance ASTM 2137
Non Brittle after 3 min. @ -30o C Pass Pass

Z2 FDA Status
Compliant to FDA 21CFR Sec 177-2600 Rubber articles intended for repeated use.