



Marco Compound # B1039 70 Durometer, White, FDA Compliant Buna-N Technical Datasheet

Common Names:

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

General Description:

Buna-N is the most commonly used general purpose o-ring material because of relative low cost, good mechanical properties, and basic resistance to many common lubricants. Physical and chemical resistances vary by compound formulation. Marco compound B1039 is specifically formulated to be FDA compliant. 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
- Relative low cost
- 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

Service Temperature:

-30 to 250°F (-34 to 121°C)

Specification:

ASTM D2000 M5BG707 A14 B14 EO14 EO34

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	73
Color	White	White
Tensile Strength, MPa (psi)	7 (1015)	14 (2030)
Ultimate Elongation, %	200	371
Specific Gravity	-----	1.423

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	-4
Ultimate Elongation Change, %	-40	-7

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.

COMPRESSION SET – B14, ASTM D 395 Method B (22 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set %	25	12

FLUID RESISTANCE –ASTM #1 Oil – EO14, ASTM D 471 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-5 to +15	+3
Tensile Strength Change, %	-25	-1
Ultimate Elongation Change, %	-45	-9
Volume Change, %	-10 to 5	-1

FLUID RESISTANCE – IRM 903 Oil, -EO14, ASTM D 471 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	0 to -15	-8
Tensile Strength Change, %	-45	-15
Ultimate Elongation Change, %	-45	-10
Volume Change, %	0 to 35	+12

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