



Marco Compound # M1002
65 Durometer, Black, MS29513 & AMS-P-5315 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. M1002 is formulated to provide value with balance cost and performance. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:

- Meets MS29513 & AMS-P-5315
- Fuel Resistant
- 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:

-65 to 250° F

Specification:

ASTM 2000 M2BG708 B14 EF11 EF21 Z1 Z2 Z3 Z4

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	65 +/- 5	65
Color	Black	Black
Tensile Strength, psi	1,060 min.	1,500
Ultimate Elongation, %	200 min.	240
Z2 – Modulus at 100%, elongation, psi	Report	669
Z3 – Specific gravity	Report	1.33

Information within is believed to be accurate and reliable. However, Marco Rubber 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 prior to use.

HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	+/- 15	+5
Tensile Strength Change, %	+/- 30	+12
Ultimate Elongation Change, %	-50 max.	-14

COMPRESSION SET – B14, ASTM D 325 Method B (22 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set %	25 max.	6

FLUID RESISTANCE – ASTM Fuel A – EF11, ASTM D 471(70 hrs. @ 23°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	+/- 10	-4
Tensile Strength Change, %	-25 max.	-10
Ultimate Elongation Change, %	-25 max.	-15
Volume Change, %	-5 to +10	+8

FLUID RESISTANCE – ASTM Fuel B – EF21, ASTM D 471 (70 hrs. @ 23°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-30 to 0	-12
Tensile Strength Change, %	-60 max.	-29
Ultimate Elongation Change, %	-60 max	-41
Volume Change, %	0 to +40	+33

LOW TEMPERATURE RESISTANCE – F17, ASTM D 2137 Method A, 9.3.2	ASTM D2000 Requirements	Typical Test Results
TR-10, °C (°F)	Report	-47 -(53)

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