

Marco Compound # B1010

80 Durometer, Black, General Use Buna-N Technical Datasheet

Common Names:

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

General Description:

NBR 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. Specific physical and chemical resistances vary by compound formulation. Please contact sales@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:

- 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 225°F

Specification:

ASTM 2000 M6BG810 A14 B14 EO14 EO34 F16

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	80 +/- 5	77
Color	Black	Black
Tensile Strength, MPa (psi)	10 (1,450) min.	14.6 (2,120)
Ultimate Elongation, %	125 min.	422

HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	+15	+7
Tensile Strength Change, %	- 20	+3
Ultimate Elongation Change, %	-40 max.	-14

COMPRESSION SET – B14, ASTM D 325 Method B (22 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set %	25 max.	+17

FLUID RESISTANCE, ASTM NO. 1 OIL – E014, ASTM D 471 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-5 to +15	+1
Tensile Strength Change, %	-25 max.	10
Ultimate Elongation Change, %	-45 max.	-13
Volume Change, %	-10 to +5	+1

FLUID RESISTANCE – IRM 903 Oil, -EO34, ASTM D 471 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	0 to -20	-12
Tensile Strength Change, %	-45 max.	-12
Ultimate Elongation Change, %	-45 max.	-11
Volume Change, %	0 to +35	+19

LOW TEMPERATURE RESISTANCE – F16, ASTM D 2137	ASTM D2000 Requirements	Typical Test Results
(Non-brittle after 3 min. @ -35°C)	Pass	Pass

Date: 2016-7-1