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Marco Compound # B1080

90 Durometer, Black, Internally Lubricated 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:
- Internally lubricated with silicone oil
- 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.

Cure System:
Sulfur
(Peroxide cured CPDs available with improved physical, chemical, and thermal properties).

Service Temperature:
-30 to 250° F

Specification:
ASTM D2000 M6BG910 A14 B14 EO14 EO34 Z1 (Z1= With Silicone oil)

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	90 +/- 5	89
Color	Black	Black
Tensile Strength, MPa (psi). Min.	10 (1440)	15.6 (2250)
Ultimate Elongation, %	100 min.	116

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HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	+ 15	+6
Tensile Strength Change, %	- 20	-5
Ultimate Elongation Change, %	-40 max.	-10

COMPRESSION SET – B14, ASTM D 325 Method B (22 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set %	25 max.	18

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	+4
Tensile Strength Change, %	-25 max.	-1
Ultimate Elongation Change, %	-45 max.	-13
Volume Change, %	-10 to +5	-4

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	- 1
Tensile Strength Change, %	-45 max.	+ 10
Ultimate Elongation Change, %	-45 max.	+ 9
Volume Change, %	0 to +35	+ 7