

Marco Compound # B1083

70 Durometer, Black, Extended Temperature 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.

Features:

- Higher performance, improved lower and higher temperature resistance and oil resistance at higher temperature than standard NBR. Similar to Parker N0794-75 and M83461
- 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 275°F

Specification:

ASTM D2000 M2BG710 A14 B14 EO35 EF11 EF21 EO14 F19 Z1

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A, ASTM D2240	70 +/- 5	70
Color	Black	Black
Tensile Strength, MPa (psi), ASTM D2240	10 (1,450) min.	17.68 (2,563)
Ultimate Elongation, %, ASTM D412	250 min.	300
Modulus @ 100%, MPa (psi), ASTM D412		5.3 (768)

HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-15 to +15	+4
Tensile Strength Change, %	-30 TO +30	+1
Ultimate Elongation Change, %	-50 max.	-15
Volume Change, %		-1

COMPRESSION SET – B14, ASTM D 325 Method B	ASTM D2000 Requirements	Typical Test Results
Permanent Set %, (22 hrs. @ 100°C)	25 max.	12

FLUID RESISTANCE, FUEL TYPE A – EF11, ASTM D 471 (70 hrs. @ 23°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-10 to +10	-10
Tensile Strength Change, %	-25 max.	-24
Ultimate Elongation Change, %	-25 max.	-16
Volume Change, %	-5 to +10	+9.3

FLUID RESISTANCE, FUEL TYPE B – EF21, ASTM D 471 (70 hrs. @ 23°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-30 to 0	-20
Tensile Strength Change, %	-60 max.	-42
Ultimate Elongation Change, %	-60 max.	-48
Volume Change, %	0 to +40	+39

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	+3
Tensile Strength Change, %	-25 max.	0
Ultimate Elongation Change, %	-45 max.	-6
Volume Change, %	-10 to +5	-4

LOW TEMPERATURE RESISTANCE – F19, ASTM D 2137, METHOD A	ASTM D2000 Requirements	Typical Test Results
(Non-brittle after 3 min. @ -55°C)	Pass	Pass
TR-10 Retraction at lower temperature resistance, ASTM D1329		-48° C

Date: 2016-7-1