



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

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.