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Marco Compound # B1138
80 Durometer, Black, High Acrylonitrile 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 fuels and lubricants. Specific physical and chemical resistances vary by compound formulation. Marco compound B1138 is specially formulated with higher Acrylonitrile content compared to standard NBR which results in better fuel resistance and mechanical properties. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:
- High acrylonitrile content (Appx. 45%)
- 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 250°F
(Additional CPDs available with -65°F and +275°F service temps).

Specification:
ASTM D2000 M6BG814 A14 B14 EO14 EO34

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	80 +/- 5	79
Color	Black	Black
Tensile Strength, MPa (psi)	14.0 (2030) min.	20.7 (3002)
Ultimate Elongation, %	125 min.	172
Specific Gravity	-----	1.268

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HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Hardness Change, points	+/- 15	+4
Tensile Strength Change, %	+/- 20	+1
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.	6

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

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	-5
Tensile Strength Change, %	-45 max.	-8
Ultimate Elongation Change, %	-45 max.	-8
Volume Change, %	0 to +35	+9

Date: 2015-12-17