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(800) 775-6525 Fax: (800) 421-2923
engineering@marcorubber.com
www.marcorubber.com

Marco Compound # B1134
90 Durometer, Black, Ultra Low Temperature Buna-N
Technical Datasheet

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

General Description:
Nitrile 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. Marco compound B1134 is a 90 durometer material specially formulated for excellent low temperature resistance. Specific physical and chemical resistances vary by compound formulation.

Features:
- Higher performance, improved low temperature resistance compared to standard NBR
- 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:
-49 to 250°F (-45 to 121°C)

Specification:
ASTM D2000 M6BG910 A15 B14 EO14 EO34 F17

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A, ASTM D2240	90 +/- 5	89
Color	Black	Black
Tensile Strength, MPa (psi), ASTM D2240	10 (1450) min.	18.4 (2669)
Ultimate Elongation, %, ASTM D412	100 min.	151
Specific Gravity	-----	1.306

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HEAT RESISTANCE – A14, ASTM D 573 (70 hrs. @ 100°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Hardness Change, points	± 15	+2
Tensile Strength Change, %	-20	+5
Ultimate Elongation Change, %	-50 max.	+26

COMPRESSION SET – B14, ASTM D 325 Method B (22 hrs. @ 100°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Permanent Set, %	25 max.	8

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	+1
Tensile Strength Change, %	-25 max.	+5
Ultimate Elongation Change, %	-45 max.	-15
Volume Change, %	-10 to +5	-1

FLUID RESISTANCE, IRM 903 OIL – EO14, ASTM D 471 (70 hrs. @ 100°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Hardness Change, points	0 to -15	-11
Tensile Strength Change, %	-45 max.	-4
Ultimate Elongation Change, %	-45 max.	-13
Volume Change, %	0 to +35	+18

LOW TEMPERATURE RESISTANCE – F19, ASTM D 2137, Method A	**ASTM D2000 Requirements**	**Typical Test Results**
Non-brittle after 3 min. @ -40°C	Pass	Pass