



**Marco Compound # M1007**  
**70 Durometer, Black, AMS-7270K 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. M1007 is formulated to provide value with balance cost and performance. Please contact [engineering@marcorubber.com](mailto:engineering@marcorubber.com) for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

**Features:**

- Meets AMS-7270K.
- Excellent fuel resistance.
- 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

**Service Temperature:**

-65 to 250° F

**PHYSICAL PROPERTY STANDARDS**

ORIGINAL PROPERTIES	AMS-7270K Requirements	Typical Test Results
Hardness, Shore A, ASTM D2240	70 +/- 5	74
Color	Black	Black
Tensile Strength, psi, ASTM D1414	1,500 min.	2,500
Ultimate Elongation, %, ASTM D1414	150 min.	350
Specific Gravity, ASTM D297	As determined	1.24

<b>AIR AGED – ASTM D573 (70 hrs. @ 212°F)</b>	<b>AMS-7270K Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points.	0 TO +10	+2
Tensile Strength Change, %	-25 max.	+1
Ultimate Elongation Change, %	-40 max.	-14
Bend (flat) per AMS-7270K	No Cracks	Pass

<b>COMPRESSION SET – AMS 3021 FLUID (70 hrs. @ 257°F)</b>	<b>AMS-7270K Requirements</b>	<b>Typical Test Results</b>
Permanent Set, %	75 max.	64

<b>AROMATIC FUEL RESISTANCE – ASTM Reference Fuel B immersion – ASTM D471 and ASTM D1414 (68 hrs. @ 73°F)</b>	<b>AMS-7270K Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points	-25 to 0	-8
Tensile Change, % max.	-65 max	-49
Elongation change, % max.	-55 max.	-29
Volume Change, %	0 to 40	+34

<b>OIL RESISTANCE, IRM 903 Oil Immersion – ASTM D471 and ASTM D1414 (70 hrs. @ 302 °F)</b>	<b>AMS-7270K Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points	-25 to 0	-4
Volume Change, %	+15 to +35	+15

<b>LOW TEMPERATURE BRITTLENESS – Fuel B, 48 hrs. @ 73°F then Fuel A (48 hrs. @ 73°F), then Fuel A (5hrs. @ -40 oC) per AMS-7270K paragraph 4.5.2</b>	<b>AMS-7270K Requirements</b>	<b>Typical Test Results</b>
Volume Change, %	-5 max.	-1.4

<b>LOW TEMPERATURE BRITTLENESS – Fuel B, 48 hrs. @ 73°F then Fuel A (48 hrs. @ 73°F), then Fuel A (5hrs. @ -40 oC) per AMS-7270K paragraph 4.5.2</b>	<b>AMS-7270K Requirements</b>	<b>Typical Test Results</b>
Bend Oval	No Cracks	Pass