

## Marco Compound # R1001 70 Durometer, Black, HNBR Nitrile Technical Datasheet

### **Common Names:**

**HNBR** (Hydrogenated acrylonitrile butadiene rubber), **Hydrogenated Nitrile**

### **General Description:**

Hydrogenated Nitrile was specifically developed for increased temperature resistance and better compatibility with new automotive fuels. Hydrogenated Nitrile also offers higher strength and minimal degradation at high temperatures. Please contact [sales@marcorubber.com](mailto:sales@marcorubber.com) for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

### **Features:**

- Extended temperature capabilities.
- Enhanced chemical compatibility with new automotive fuels.
- Good/Excellent resistance to compression set and tear/abrasion.
- Good/Excellent resistance to many petroleum oils/greases, H<sub>2</sub>S, hydraulic fluids, alcohol, ambient water, silicone greases, Di-ester base lubricants, CO<sub>2</sub> 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.

### **Cure System:**

Peroxide

### **Service Temperature:**

-30 to 325°F (-22 to 163°C)

### **Specification:**

ASTM D2000 M3DH710 A26 B16 EO16 EO36

## PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	68
Color	Black	Black
Tensile Strength, psi	1,440 min.	2,200
Ultimate Elongation, %	200 min.	225

<b>HEAT RESISTANCE – A26, ASTM D 573 (70 hrs. @ 150°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points	+ 10	+8
Tensile Strength Change, %	- 25	-1
Ultimate Elongation Change, %	-30	-22

<b>COMPRESSION SET – B16, ASTM D 325 Method B (22 hrs. @ 150°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Permanent Set %	30 max.	8

<b>FLUID RESISTANCE –ASTM #1 Oil – EO16, ASTM D 471 (70 hrs. @ 100°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points	-5 to +10	-2
Tensile Strength Change, %	-20 max.	+5
Ultimate Elongation Change, %	-30 max.	-18
Volume Change, %	+/- 5	+0.3

<b>FLUID RESISTANCE – ASTM #1 Oil - EO36, ASTM D 471 (70 hrs. @ 100°C)</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
Hardness Change, points	-15 max.	-11
Tensile Strength Change, %	-30 max.	-13
Ultimate Elongation Change, %	-30 max.	-5
Volume Change, %	+25 max.	+5

<b>LOW TEMP. RETRACTION – ASTM D 1329</b>	<b>ASTM D2000 Requirements</b>	<b>Typical Test Results</b>
TR-10, °C	-----	-27.5

Date: 2016-5-10