



Marco Compound # R1008 90 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. Our R1008 compound is a peroxide-cured explosive decompression resistant HNBR. R1008 provides good chemical resistance crude oil, lubricating agents and oil additives with superior resistance to carbon dioxide, water, drilling mud and amine corrosion inhibitors. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature or certain physical properties are required.

Features:

- Extended temperature capabilities
- Tested to NORSOK M-710 standard for Explosive Decompression
- Enhanced chemical compatibility with new automotive fuels.
- Good/Excellent resistance to compression set and tear/abrasion.
- Good/Excellent resistance to many petroleum oils/greases, H₂S, hydraulic fluids, alcohol, ambient water, silicone greases, Di-ester base lubricants, CO₂ 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:

-15 to 350° F (-26 to 177°C)

Specification:

ASTM D2000 M2DH920 A26 B16 B36 EO16 EO36

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	90 ± 5	88
Color	Black	Black
Tensile Strength, psi	2900 min.	4536
Ultimate Elongation, %	100 min.	170
Modulus @ 100%, psi	----	2612
Specific Gravity (g/cm ³)	----	1.29

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.

HEAT RESISTANCE – A26, ASTM D 573 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	+ 10	-1
Tensile Strength Change, %	- 25	-8
Ultimate Elongation Change, %	-30	-13

COMPRESSION SET – B16, ASTM D 325 Method B (22 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set % (Button)	30 max.	19.5

COMPRESSION SET – B36, ASTM D 325 Method B (22 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set % (Plied)	50%	29

FLUID RESISTANCE –IRM 901 Oil – EO16, ASTM D 471 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-5 to +10	-1
Tensile Strength Change, %	-20 max.	-7
Ultimate Elongation Change, %	-30 max.	-5
Volume Change, %	+/- 5	-0.7

FLUID RESISTANCE –IRM 903 Oil – EO36, ASTM D 471 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points	-15 max.	-10
Tensile Strength Change, %	-40 max.	-17
Ultimate Elongation Change, %	-40 max.	-16
Volume Change, %	+25 max.	+11.5

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