Request a Quote

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Marco Compound # R1013
70 Durometer, Green, Lower Temperature 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. Marco compound R1013 is formulated for enhanced low temperature resistance compared to standard HNBR materials. Specific physical and chemical resistances vary by compound formulation. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:
- Enhanced low temperature resistance.
- Compatible with Freon R-134a and compressor lubricant oil.
- 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_2S, hydraulic fluids, alcohol, ambient water, silicone greases, Di-ester base lubricants, CO_2 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:
-58 to 325°F (-50 to 162°C)

Specification:
ASTM D2000 M3DH710 A26 B16 EO16 Z1

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	70
Color	Green	Green
Tensile Strength, psi	1450 min.	2480
Ultimate Elongation, %	200 min.	208

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HEAT RESISTANCE – A26, ASTM D 573 (70 hrs. @ 150°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Hardness Change, points	+ 10	+3
Tensile Strength Change, %	- 25	+1
Ultimate Elongation Change, %	-30	+20

COMPRESSION SET – B16, ASTM D 325 Method B (22 hrs. @ 150°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Permanent Set %	30 max.	18

FLUID RESISTANCE –ASTM #1 Oil – EO16, ASTM D 471 (70 hrs. @ 100°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Hardness Change, points	-5 to +10	-1
Tensile Strength Change, %	-20 max.	+8
Ultimate Elongation Change, %	-30 max.	+29
Volume Change, %	+/- 5	+2

COMPRESSION SET – Z1, ASTM D 2137 Method A 9.3.2 (3 min. @ -45°C)	**ASTM D2000 Requirements**	**Typical Test Results**
Brittleness	Non-Brittle	Pass

Date: 2016-6-6