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# Marco Compound # R1006
## 75 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 engineering@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, $H_2S$, 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:
-30 to 325° F

Specifications:
Meets ASTM D2000 M3DH710 A26 B16 B36 EO16 EO36 F17

## TYPICAL PHYSICAL PROPERTIES

| ORIGINAL PROPERTIES | ASTM D2000 Requirements | Typical Test Results |
|---|---|---|
| Hardness, Shore A | 75 +/- 5 | 73 |
| Color | Black | Black |
| Tensile Strength, psi | 1,440 | 2,750 |
| Ultimate Elongation, % | 200 | 285 |
| Specific Gravity | | 1.246 |

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| HEAT RESISTANCE –ASTM D 573 (70 hrs. @ 150°C) | ASTM D2000 Requirements | Typical Test Results |
|---|---|---|
| Hardness Change, points | +/- 10 | +5 |
| Tensile Strength Change, % | +/- 25 | -5 |
| Ultimate Elongation Change, % | -30 max. | -11 |

| COMPRESSION SET – ASTM D 325 Method B (22 hrs. @ 200°C) | ASTM D2000 Requirements | Typical Test Results |
|---|---|---|
| Permanent Set % | 30 max. | 15 |

| FLUID RESISTANCE – IRM 901 Oil, - ASTM D 471 (70 hrs. @ 150°C) | ASTM D2000 Requirements | Typical Test Results |
|---|---|---|
| Hardness Change, points | -5 to +10 | -3 |
| Tensile Strength Change, % | -20 max. | +1 |
| Ultimate Elongation Change, % | -30 max. | -4 |
| Volume Change, % | +/-5 | -1.5 |

| FLUID RESISTANCE – IRM 903 Oil, - ASTM D 471 (70 hrs. @ 150°C) | ASTM D2000 Requirements | Typical Test Results |
|---|---|---|
| Hardness Change, points | +15 -30 | -9 |
| Tensile Strength Change, % | -30 max. | -6 |
| Ultimate Elongation Change, % | -30 max. | -10 |
| Volume Change, % | +25 | +13.8 |

| FLUID RESISTANCE – ATF Oil, - ASTM D 471 (70 hrs. @ 150°C) | ASTM D2000 Requirements | Typical Test Results |
|---|---|---|
| Hardness Change, points | | -6 |
| Tensile Strength Change, % | | -1 |
| Ultimate Elongation Change, % | | +2 |
| Volume Change, % | | +6.4 |