



**MR O-RING**  
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## Material Datasheet

**Compound #: N90**

**Nitrile (Buna), General Purpose**

### Material Summary

|   |  |
|---|--|
| Material Type:                          | NBR                                    |
| Durometer:                              | 90                                     |
| Color:                                  | Black                                  |
| Recommended Temperature Range (Static): | -20°C to 120°C                         |
| Cure System:                            | Sulfur                                 |
| Specification:                          | ASTM D2000 M6BG910 A14 B14 EO14 EO34 Z |

| Original Properties   | Requirements     | Typical Results |
|---|------------------|-----------------|
| Hardness, (Shore A) (ASTM D2240-15 <sup>e1</sup> )                    | 90±5             | 87              |
| Tensile Strength, psi(MPa) (ASTM D412-16)                             | 1450(10)(min)    | 2596(17.9)      |
| Elongation, (%) (ASTM D412-16)  | 100(min)         | 180             |
| Specific Gravity (ACN Content 33%)                                    | 1.30±0.05        | 1.31            |
| <b>(A14) Heat age, 70 Hrs @ 100 °C (ASTM D573-15)</b>                 |                  |                 |
| Hardness Change, pts.   | ±15              | +4              |
| Tensile Strength Change, %  | -20(max)         | +3              |
| Elongation Change, %  | -40(max)         | -6              |
| <b>(B14) Compression set, 22 Hrs @ 100 °C (ASTM D395-16,Method B)</b> |                  |                 |
| -   | 25%(button)(max) | 12              |
| <b>(EO14) IRM 901 Oil, 70 Hrs @ 100 °C (ASTM D471-16a)</b>            |                  |                 |
| Hardness Change, pts.   | -5~+10           | +3              |
| Tensile Strength Change, %  | -25(max)         | +5              |
| Elongation Change, %  | -45(max)         | -2              |
| Volume Change, %  | -10~+5           | -4              |
| <b>(EO34) IRM 903 Oil, 70 Hrs @ 100 °C (ASTM D471-16a)</b>            |                  |                 |
| Hardness Change, pts.   | 0~-20            | -3              |
| Tensile Strength Change, %  | -45(max)         | +5              |
| Elongation Change, %  | -45(max)         | +2              |
| Volume Change, %  | 0~+35            | -4              |
| <b>(Z1) Retraction at Lower Temp Resistance (ASTM D1329-16)</b>       |                  |                 |
| 51mm die, 50% elongation, °C  |                  | -20             |

\*American Society for Testing and Materials

Report Date: 8/25/2020

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