



# MR O-RING

QUALITY YOU TRUST, SERVICE YOU RELY ON

## Material Datasheet

**Compound #: N70**

**Nitrile (Buna), General Purpose**

| Material Summary                                              |                                                     |                 |
|---------------------------------------------------------------|-----------------------------------------------------|-----------------|
| Material Type:                                                | NBR                                                 |                 |
| Durometer:                                                    | 70                                                  |                 |
| Color:                                                        | Black                                               |                 |
| Recommended Temperature Range (Static):                       | -30°C to 121°C                                      |                 |
| Specification:                                                | ASTM D2000 M2BG714 A14 B14 EA14 EF11 EF21 EO14 EO34 |                 |
| Original Properties                                           | Requirements                                        | Typical Results |
| Hardness, (Shore A) (ASTM D2240-15 <sup>e1</sup> )            | 70±5                                                | 87              |
| Tensile Strength, psi(MPa) (ASTM D412-16)                     | 2030(14)(min)                                       | 2393(16.5)      |
| Elongation, (%) (ASTM D412-16)                                | 250(min)                                            | 263             |
| Modulus at 100%, psi(MPa) (ASTM D412-16)                      |                                                     | 852(5.87)       |
| Density, (Mg/m <sup>3</sup> ) (CNS 5341-96, Method A)         |                                                     | 1.25            |
| (A14) Heat age, 70 Hrs @ 100 °C (ASTM D573-04)                |                                                     |                 |
| Hardness Change, pts.                                         | ±15                                                 | +4              |
| Tensile Strength Change, %                                    | ±30                                                 | +12             |
| Elongation Change, %                                          | -50(max)                                            | -17             |
| (B14) Compression set, 22 Hrs @ 100 °C (ASTM D395-18B)        |                                                     |                 |
| -                                                             | 25%(button)(max)                                    | 12              |
| (EA14) Water Resistance, 70 Hrs @ 100 °C (ASTM D471-16a)      |                                                     |                 |
| Hardness Change, pts.                                         | ±10                                                 | -3              |
| Volume Change, %                                              | ±15                                                 | +6              |
| (EF11) ASTM Fuel A Resistance, 70 Hrs @ 23 °C (ASTM D471-16a) |                                                     |                 |
| Hardness Change, pts.                                         | ±10                                                 | -4              |
| Tensile Strength Change, %                                    | -25(max)                                            | -12             |
| Elongation Change, %                                          | -25(max)                                            | -15             |
| Volume Change, %                                              | -5~+10                                              | +5              |
| (EF21) ASTM Fuel B Resistance, 70 Hrs @ 23 °C (ASTM D471-16a) |                                                     |                 |
| Hardness Change, pts.                                         | -30~0                                               | -13             |
| Tensile Strength Change, %                                    | -60(max)                                            | -26             |
| Elongation Change, %                                          | -60(max)                                            | -31             |
| Volume Change, %                                              | 0~+40                                               | +23.6           |



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**(EO14) IRM 901 Oil, 70 Hrs @ 100 °C (ASTM D471-16a)**

|                            |          |      |
|----------------------------|----------|------|
| Hardness Change, pts.      | -5~+10   | +8   |
| Tensile Strength Change, % | -25(max) | +11  |
| Elongation Change, %       | -45(max) | -17  |
| Volume Change, %           | -10~+5   | -9.6 |

**(EO34) IRM 903 Oil, 70 Hrs @ 100 °C (ASTM D471-16a)**

|                            |          |     |
|----------------------------|----------|-----|
| Hardness Change, pts.      | -10~+5   | -6  |
| Tensile Strength Change, % | -45(max) | +5  |
| Elongation Change, %       | -45(max) | -20 |
| Volume Change, %           | 0~+25    | +12 |

\*American Society for Testing and Materials

Report Date: 8/12/2020

Information within this report is believed to be accurate and reliable. However, Mr. O-Ring 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.