

**NBR (NITRILE) – BLACK  
70 SHORE HARDNESS  
TECHNICAL DATASHEET**

**CURE SYSTEM: SULPHUR**

**Temperature Range:** -30° C to +100° C

**Specification Met:**

ASTM D2000 M2BG714 A14 B14 EA14 EF11 EF21 EO14 EO34 F17

**PHYSICAL PROPERTIES**

| PARAMETERS                                       | REQUIREMENT<br>ASTM D2000 | ISG TEST VALUE |
|--|---------------------------|----------------|
| Hardness, Shore A (ASTM D 2240)                  | 70 ± 5                    | 70             |
| Tensile Strength, Mpa (ASTM D412)                | Min 14.0                  | 14.4           |
| Elongation At Break, % (ASTM D 412)              | Min 250                   | 325            |
| Specific Gravity, g/cm <sup>3</sup> (ASTM D 297) | --                        | 1.27           |

| RESISTANCE TO HEAT -- ASTM D 573<br>(70 Hrs At 100°C) – A14 | REQUIREMENT<br>ASTM D2000 | ISG TEST VALUE |
|---|---------------------------|----------------|
| Hardness Change, Points                                     | ±15                       | +3             |
| Tensile Strength Change %                                   | ± 30                      | +10            |
| Elongation Change %   | Max -50                   | -28            |

| COMPRESSION SET -- ASTM D395 – B14 | REQUIREMENT<br>ASTM D2000 | ISG TEST VALUE |
|------------------------------------|---------------------------|----------------|
| Compression Set % 22hrs @ 100°C    | Max 25                    | 12%            |

| RESISTANCE TO WATER -- ASTM D 471<br>(70 Hrs At 100°C) – EA14 | REQUIREMENT<br>ASTM D2000 | ISG TEST VALUE |
|---|---------------------------|----------------|
| Hardness Change, Points                                       | ±10                       | -5             |
| Volume Change %   | ± 15                      | +10            |

| RESISTANCE TO FUEL A -- ASTM D 471<br>(70 Hrs At 23°C) – EF11 | REQUIREMENT<br>ASTM D2000 | ISG TEST VALUE |
|---|---------------------------|----------------|
| Hardness Change, Points                                       | ±10                       | -4             |
| Tensile Strength Change %                                     | Max -25                   | -15            |
| Elongation Change %   | Max -25                   | --20           |
| Volume Change %   | -5 To 10                  | +5             |

| <b>RESISTANCE TO FUEL B -- ASTM D 471<br/>(70 Hrs At 23°C) – EF21</b> | <b>REQUIREMENT<br/>ASTM D2000</b> | <b>ISG TEST VALUE</b> |
|---|-----------------------------------|-----------------------|
| Hardness Change, Points   | -30 To 0                          | -15                   |
| Tensile Strength Change %   | Max -60                           | -39                   |
| Elongation Change %   | Max -60                           | -33                   |
| Volume Change %   | 0 To +40                          | +23                   |

| <b>RESISTANCE TO OIL 901 -- ASTM D 471<br/>(70 Hrs At 100°C) – EO14</b> | <b>REQUIREMENT<br/>ASTM D2000</b> | <b>ISG TEST VALUE</b> |
|---|-----------------------------------|-----------------------|
| Hardness Change, Points   | -5 To +10                         | +7                    |
| Tensile Strength Change %   | Max -25                           | +7                    |
| Elongation Change %   | Max -45                           | +25                   |
| Volume Change %   | -10 To +5                         | -8                    |

| <b>RESISTANCE TO OIL 903 -- ASTM D 471<br/>(70 Hrs At 100°C) – EO34</b> | <b>REQUIREMENT<br/>ASTM D2000</b> | <b>ISG TEST VALUE</b> |
|---|-----------------------------------|-----------------------|
| Hardness Change, Points   | -10 To +5                         | +7                    |
| Tensile Strength Change %   | Max -45                           | +7                    |
| Elongation Change %   | Max -45                           | +25                   |
| Volume Change %   | -10 To +25                        | +6                    |

| <b>LOW TEMP RESISTANCE -- ASTM D 2137 – F17</b> | <b>REQUIREMENT<br/>ASTM D2000</b> | <b>ISG TEST VALUE</b> |
|---|-----------------------------------|-----------------------|
| Non-Brittle After 3Min @ -40°C                  | --                                | PASS                  |

**Ref Date: 23 April 2023**