MR O-RING
THE EASIEST WAY TO BUY O-RINGS ONLINE

# Material Datasheet

## Compound #: V90 — Genuine Viton®, General Purpose

| Material Summary | | |
|---|---|---|
| Material Type: | FKM | |
| Durometer: | 90 | |
| Color: | Black | |
| Special Properties: | | |
| Recommended Temperature Range (Static): | -26°C to 232°C | |
| Cure System: | Bisphenol | |
| Specification: | ASTM D2000 M2HK910 A1-10 B38 EF31 EO78 EO88 Z1 | |
| **Original Properties** | **Requirements** | **Typical Results** |
| Hardness, (Shore A) (ASTM D2240-05) | 95±5 | 90.5 |
| Tensile Strength, psi(MPa) (ASTM D412-06a) | 1450(10)(min) | 2117(14.6) |
| Elongation, (%) (ASTM D412-06a) | 100(min) | 131 |
| Modulus at 100%, psi(MPa) (ASTM D412-06a) | | 1770(12.21) |
| Specific Gravity, g/cm$^3$ | | 1.84 |
| **(A1-10) Heat age, 70 Hrs @ 250 ℃ (ASTM D573-04)** | | |
| Hardness Change, pts. | +10(max) | +3 |
| Tensile Strength Change, % | -25(max) | +1 |
| Elongation Change, % | -25(max) | -7 |
| Weight Change, % | | -1.6 |
| **(B38) Compression Set, 22 Hrs @ 200°C (ASTM D395-03B)** | | |
| | 50%(plied)(max) | 17.7 |
| **(EF31) ASTM Fuel C Resistance, 70 Hrs @ 23 ℃ (ASTM D471-12a)** | | |
| Hardness Change, pts. | ±5 | -2 |
| Tensile Strength Change, % | -25(max) | -5 |
| Elongation Change, % | -20(max) | +2 |
| Volume Change, % | 0~+10 | +2.5 |
| **(EO78) ASTM No. 101 Oil, 70 Hrs @ 200 ℃ (ASTM D471-12a)** | | |
| Hardness Change, pts. | -15~+5 | -7 |
| Tensile Strength Change, % | -40(max) | -5 |
| Elongation Change, % | -20(max) | +14 |
| Volume Change, % | 0~+15 | +8.7 |

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| (EO88) HATCO 7700 Oil, 70 Hrs @ 200 ℃ (ASTM D471-12a) | | |
|---|---|---|
| Hardness Change, pts. | -15~+5 | -10 |
| Tensile Strength Change, % | -40(max) | -10 |
| Elongation Change, % | -20(max) | -2 |
| Volume Change, % | +25(max) | +12.7 |
| **(Z1) Low Temp Retraction Test (TR) (ASTM D1329-08)** | | |
| Testing Elongation 50%,<br>The Equipment of measure temperature: thermocouple,<br>Length of Sample: 51 mm,<br>Rate of Temperature Increasing: 1°C/min,<br>Test Temperature: 26°C,<br>Collant: Methanol | | -17.2 |

*American Society for Testing and Materials

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