

FKM compounds are widely used in chemical, automotive, aerospace and industrial applications. These compounds offer excellent chemical and temperature resistance. Marco Rubber stocks all USA standard Viton O-Rings sizes, thousands of metric Viton O-Ring and non-standard sizes.

## ABOUT #V1052

Our V1052 high durometer FKM Type B compound has been specifically designed for use in Oil and Gas drilling applications, it is Explosive decompression resistant. This compound exhibits excellent extrusion resistance and low compression set at high temperatures. It has excellent resistance to fuels, aliphatic, aromatic and chlorinated hydrocarbons, non-flammable hydraulic fluids (HFD) and many organic chemicals.

## FEATURES

- Tested and certified for Explosive Decompression resistance
- Norsok M710
- Low compression set at high temps.
- Superior resistance to RGD reduces maintenance and increases MTB (mean time between failures)

## APPLICATION EXAMPLES

- Exploration and drilling equipment
- Subsea Valves and pumps
- Good chemical resistance to carbon tetrachloride, diester synthetic lubricants, gasoline, hot air and toluene.

## ADDITIONAL INFORMATION

- Service Temperature of -20° to 437°F
- Spec: ASTM D2000 M3HK910 A1-10 B37 B38 EF31 E078 Z1 Z2 Z3 Z4 Z5 Z6 Z7

This information is accurate and reliable to the best of our knowledge. However, Marco Rubber makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It is the customer's responsibility to evaluate parts prior to use.

## PHYSICAL PROPERTIES

| ORIGINAL PROPERTIES  | Specification Requirements        | Typical Test Results        |
|--|-----------------------------------|-----------------------------|
| Hardness, Shore A (ASTM D2240)                                       | 90 +/- 5                          | 93                          |
| Color  | Black                             | Black                       |
| Tensile Strength, psi (D412)   | 1,400min.                         | 3410                        |
| Ultimate Elongation, % (D412)  | 100 Min.                          | 103                         |
| Specific Gravity, ASTM D297  | As determined                     | 1.81                        |
| <b>HEAT RESISTANCE – AIR AGING ASTM D573 (70 hrs. @ 482°F)</b>       | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Hardness Change, Shore A, ASTM D2240                                 | +/- 15                            | 0                           |
| Tensile Strength Change, %, ASTM D1414                               | +/- 30                            | -30                         |
| Ultimate Elongation Change, %, ASTM D1414                            | -50 (max)                         | -1                          |
| <b>FLUID AGING, IRM 903 OIL - (70 hrs. @ 302°F)</b>                  | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Volume Change, %, ASTM D471  | 0 to + 5                          | 1                           |
| <b>COMPRESSION SET – ASTM D395 Method B (22 hrs. @ 392°F)</b>        | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Permanent Set %  | 50 (max)                          | 17                          |
| <b>FLUID AGING, ASTM FUEL C, ASTM D471 (70 hrs. @ 73°F)</b>          | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Hardness Change, Shore A, ASTM D2240                                 | +/- 5                             | -3                          |
| Tensile Strength Change, %, ASTM D1414                               | -25 (max)                         | -12                         |
| Ultimate Elongation Change, %, ASTM D1414                            | -20 (max)                         | +2                          |
| Volume Change, %, ASTM D297  | 0 to + 10                         | 3                           |
| <b>FLUID AGING, SERVICE LIQUID #101, ASTM D471 (70 hrs. @ 392°F)</b> | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Hardness Change, Shore A, ASTM D2240                                 | -15 to +5                         | -8                          |
| Tensile Strength Change, %, ASTM D1414                               | -40 (max)                         | -16                         |
| Ultimate Elongation Change, %, ASTM D1414                            | -20 (max)                         | -8                          |
| Volume Change, %, ASTM D297  | 0 to +15                          | 9                           |
| <b>TEMPERATURE RETRACTION – ASTM D1329</b>                           | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| TR-10, Degrees F   | Report                            | 3                           |
| <b>DIFFERENTIAL SCANNING CALORIMETRY</b>                             | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Glass Transition, Degrees F  | Report                            | 0                           |
| <b>ABRASION RESISTANCE, 1000 REV. H18, 1000g (D3389)</b>             | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Weight loss in mg per revolution                                     | Report                            | 0.2776                      |
| <b>API EXTRUSION, 350o F, 7500 psi, gap °F 0.090"</b>                | <b>Specification Requirements</b> | <b>Typical Test Results</b> |
| Height loss, pct   | Report                            | 29                          |
| Weight loss, pct   | Report                            | 17                          |

| EXPLOSIVE DECOMPRESSION RESISTANCE, CO2 AT 750 psi, (0568-325). 24 Hrs. @ 70°F, Immediately After Decompression | Specification Requirements | Typical Test Results  |
|---|----------------------------|-----------------------|
| Hardness change, pts, Shore A   | Report                     | -15                   |
| Cross-section change, pct.  | Report                     | 15                    |
| Median Visual Rating (a)  | Report                     | 1 (No visible damage) |
| EXPLOSIVE DECOMPRESSION RESISTANCE, CO2 AT 750 psi, (0568-325). 24 Hrs. @ 70°F, 10 Minutes After Decompression  | Specification Requirements | Typical Test Results  |
| Hardness change, pts, Shore A   | Report                     | -14                   |
| Cross-section change, pct.  | Report                     | 6                     |
| Median Visual Rating (a)  | Report                     | 1 (No visible damage) |
| EXPLOSIVE DECOMPRESSION RESISTANCE, CO2 AT 750 psi, (0568-325). 24 Hrs. @ 70°F, 45 Minutes After Decompression  | Specification Requirements | Typical Test Results  |
| Hardness change, pts, Shore A   | Report                     | -10                   |
| Cross-section change, pct.  | Report                     | 3                     |
| Median Visual Rating (a)  | Report                     | 1 (No visible damage) |