



Marco Compound # S1180

70 Durometer, Gray Silicone

Technical Datasheet

Common Names:

Silicone, VQM

General Description:

Silicones are excellent seal materials for extreme temperature in static applications. Silicones can be synthesized with a wide variety of properties and compositions. Marco compound S1180 is a general purpose, gray colored, 70 durometer silicone material. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:

- Excellent heat and compression resistance
- Excellent resistance to oxygen, ozone and sunlight
- Good chemical resistance
- Resistance to fungal and biological attack
- Flexible
- Good electrical insulation

Limitations:

- Not recommended for dynamic application
- Concentrated solvents, oils, concentrated acids, diluted sodium hydroxide.
- Poor abrasion resistance
- Low strength
- High gas permeability

Service Temperature:

-75 to 400° F (-60 to 205° C)

Specification:

ASTM 2000 M7GE705 A19 B37 EA14 EO16 EO36 F19

PHYSICAL PROPERTY STANDARDS

| ORIGINAL PROPERTIES | ASTM D2000 Requirements | Typical Test Results |
|-----------------------------|-------------------------|----------------------|
| Hardness, Shore A | 70 +/- 5 | 69 |
| Color | Gray | Gray |
| Tensile Strength, MPa (psi) | 5.0 (725) | 6.3 (913) |
| Ultimate Elongation, % | 150 | 205 |
| Specific Gravity | ----- | 1.31 |

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

| HEAT RESISTANCE – A19, ASTM D 573 (70 hrs. @ 225°C) | ASTM D2000 Requirements | Typical Test Results |
|--|--------------------------------|-----------------------------|
| Hardness Change, points, Shore A | +10 | +6 |
| Tensile Strength Change, %, max. | -25 | -14 |
| Ultimate Elongation Change, %, max. | -30 | -13 |

| COMPRESSION SET – B37, ASTM D 325 Method B (22 hrs. @ 175°C) | ASTM D2000 Requirements | Typical Test Results |
|---|--------------------------------|-----------------------------|
| Permanent Set, %, max. | 30 | 19 |

| FLUID RESISTANCE –ASTM #1 Oil – EO16, ASTM D 471 (70 hrs. @ 150°C) | ASTM D2000 Requirements | Typical Test Results |
|---|--------------------------------|-----------------------------|
| Hardness Change, points, Shore A | 0 to -15 | -5 |
| Tensile Strength Change, %, max. | -20 | -6 |
| Ultimate Elongation Change, %, max. | -20 | -11 |
| Volume Change, % | 0 to 1+5 | +6 |

| FLUID RESISTANCE – IRM 903 Oil, -EO36, ASTM D 471 (70 hrs. @ 150°C) | ASTM D2000 Requirements | Typical Test Results |
|--|--------------------------------|-----------------------------|
| Hardness Change, points, Shore A, max. | -40 | -31 |
| Volume Change, %, max. | +60 | +21 |

| LOW TEMPERATURE RESISTANCE – F19, ASTM D 2137 Method A, 9.3.2 | ASTM D2000 Requirements | Typical Test Results |
|--|--------------------------------|-----------------------------|
| (Non-brittle after 3 min. @ -55°C) | Non-Brittle | Passed |

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