Request a Quote

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Marco Compound # S1151
80 Durometer, Orange, High Temperature 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. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:
- High Temperature
- 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:
-65 to 600° F (-54 to 315° C)

Specification:
ASTM 2000 M5GE806 A19 B37 EO16 EO36 F19 Z1 (Z1 = High Temp.)

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	80 +/- 5	76
Color	Orange	Orange
Tensile Strength, MPa (psi)	6.0 (865)	7.5 (1080)
Ultimate Elongation, %	100	165
Specific Gravity		1.182

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HEAT RESISTANCE – A19, ASTM D 573 (70 hrs. @ 225°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, Shore A	+10	+5
Tensile Strength Change, %, max.	-25	+1
Ultimate Elongation Change, %, max.	-30	-6

COMPRESSION SET – B37, ASTM D 325 Method B (22 hrs. @ 175°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set, %, max.	25	20

FLUID RESISTANCE –ASTM #1 Oil – EO36, 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	-14
Ultimate Elongation Change, %, max.	-20	+1
Volume Change, %	0 to +10	+2

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.	-30	-19
Volume Change, %, max.	+ 60	+13

LOW TEMPARATURE BRITTLENESS – F19	ASTM D2000 Requirements	Typical Test Results
Test After 3 minutes @ -55°C	Non-Brittle	Non-Brittle