

Marco Compound # S1043

50 Durometer, Orange, Low Temperature 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 sales@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:

- Low Temperature
- Excellent heat and compression resistance
- Excellent resistance to oxygen, ozone and sunlight
- Good chemical resistance
- Resistance to fungal and biological attack
- 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

Cure System:

Peroxide

Service Temperature:

-103 to 400° F (-75 to 205° C)

Specification:

ASTM 2000 M5GE505 A19 B37 EO16 EO36 F19

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	50 +/- 5	55
Color	Orange	Orange
Tensile Strength, MPa (psi)	5.0 (720)	5.2 (750)
Ultimate Elongation, %	250	261
Specific Gravity		1.14

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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	+2
Tensile Strength Change, %, max.	-25	+7
Ultimate Elongation Change, %, max.	-30	-2

COMPRESSION SET – B37, ASTM D 325 Method B (22 hrs. @ 175°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set, %, max.	25	12

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	-4
Tensile Strength Change, %, max.	-20	-12
Ultimate Elongation Change, %, max.	-20	-7
Volume Change, %	0 to+10	+2

FLUID RESISTANCE – ASTM #3 Oil, -EO36, ASTM D 471 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, Shore A, max.	-30	-24
Volume Change, %, max.	+ 60	+15

LOW TEMPERATURE RESISTANCE – F19, ASTM D 2137 Method A, 9.3.2	ASTM D2000 Requirements	Typical Test Results
Non-brittle after 3 min. @ -100°C	Non-brittle	Non-brittle

Date: 2016-7-1

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