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(800) 775-6525 Fax: (800) 421-2923
engineering@marcorubber.com
www.marcorubber.com

Marco Compound # F1009
80 Durometer, Blue Fluorosilicone
Technical Datasheet

Common Names:
Fluorosilicone, FVMQ

General Description:
Fluorosilicone is a widely used elastomer that can be compounded to meet a wide range of applications. The mechanical and physical properties are very similar to silicone rubber. However, fluorosilicone offers improved fuel and mineral oil resistance but poor hot air resistance when compared with silicone. This material is widely used in semiconductor Ashing equipment for its resistance to oxygen plasma. 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 flexibility and resistance to compression set
- Excellent resistance to aging and weather-sunlight
- Resistance to oxidizing chemicals, animal and vegetable oils, fuels, aromatic and chlorinated solvents
- Resistant to diluted alkalies, diester oils, aliphatic and aromatic fluorocarbons, silicone oil, toluene, benzene, ozone and oxidative environments.

Limitations:
- Brake fluids, ketones, hydrazine, adelhydes, amines, ketones
- Poor abrasion resistance

Service Temperature:
-100 to 350°F

Equivalent Specification:
This compound can meet MIL-R- 25988 Class I, Type II, but it is not certifiable.

PHYSICAL PROPERTIES

ORIGINAL PROPERTIES	Specification Requirements	Typical Test Results
Hardness, Shore A, ASTM D2240	80 +/- 5	80
Color	Blue	Blue
Tensile Strength, psi, ASTM D1414	750 min.	797
Ultimate Elongation, %, ASTM D1414	70	153
Specific Gravity, ASTM D297	Report	1.58

HEAT RESISTANCE – ASTM D 573 (70 hrs. @ 392°F)	Specification Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	-5 to +10	+3
Tensile Strength Change, %, ASTM D1414	-20 (max)	-24
Ultimate Elongation Change, %, ASTM D1414	-20 (max)	-16

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COMPRESSION SET @ 350° F for 22 Hrs.	Specification Requirements	Typical Test Results
Compression Set	45 max	15%

FUEL IMMERSION TT-S-735 Type III - ASTM D 471 and ASTM D1414 (22 hrs. @ 75°F)	Specification Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	-20	-2
Tensile Strength Change, %, ASTM D1414	-30	-17
Ultimate Elongation Change, %, ASTM D1414	-30	-4
Volume Change, %, ASTM D471	+1 to +25	+1

FLUID C RESISTANCE– ASTM D 471, #1 OIL (70 hrs. @ 300°F)	Specification Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	---	+1
Tensile Strength Change, %, ASTM D1414	---	-4
Ultimate Elongation Change, %, ASTM D1414	---	-10
Volume Change, %, ASTM D471	---	+6

FLUID C RESISTANCE– ASTM D 471, #3 OIL (70 hrs. @ 300°F)	Specification Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	---	0
Tensile Strength Change, %, ASTM D1414	---	-4
Ultimate Elongation Change, %, ASTM D1414	---	-10
Volume Change, %, ASTM D471	---	+3

LOW TEMPERATURE BRITTLENESS		
Tested after 3 Minutes at -55C (-67 F)	Non-Brittle	Non-Brittle