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

Marco Compound # F1010
80 Durometer, Red Fluorosilicone with Internal PTFE
Technical Datasheet

Common Names:
Fluorosilicone, FVMQ

General Description:
Fluorosilicone is a widely used elastomer that can be compounded to meet a 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. Marco's F1010 compound is red in color and contains internal PTFE for added lubrication. 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:
- Internal PTFE lubricant
- 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:
ASTM D2000 M2FK806 A19 EF31 E036 F19 Z1 (Z1 = Internal PTFE)

PHYSICAL PROPERTIES

ORIGINAL PROPERTIES	Specification Requirements	Typical Test Results
Hardness, Shore A, ASTM D2240	80 +/- 5	83
Color	Red	Red
Tensile Strength, MPa (psi), ASTM D1414	6 (870)	8.5 (1232)
Ultimate Elongation, %, ASTM D1414	150	159
Specific Gravity, ASTM D297	Report	1.517

HEAT RESISTANCE – ASTM D 573 (70 hrs. @ 225°C)	Specification Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	+15	+3
Tensile Strength Change, %, ASTM D1414	-45	-14
Ultimate Elongation Change, %, ASTM D1414	-45	-42

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COMPRESSION SET – ASTM D1412 (22hrs @ 175°C)	**Specification Requirements**	**Typical Test Results**
Compression Set, %	----	26

FUEL IMMERSION TT-S-735 Type III - ASTM D 471 and ASTM D1414 (22 hrs. @ 23°C)	**Specification Requirements**	**Typical Test Results**
Hardness Change, Shore A, ASTM D2240	0 to 15	-15
Tensile Strength Change, %, ASTM D1414	-60	-25
Ultimate Elongation Change, %, ASTM D1414	-50	-27
Volume Change, %, ASTM D471	0 to 25	+15

FLUID RESISTANCE– ASTM D 471, #3 OIL (70 hrs. @ 150°C)	**Specification Requirements**	**Typical Test Results**
Hardness Change, Shore A, ASTM D2240	0 to -10	+0
Tensile Strength Change, %, ASTM D1414	-35	+5
Ultimate Elongation Change, %, ASTM D1414	-30	-11
Volume Change, %, ASTM D471	0 to 10	+2