

## **FVMQ - Fluorosilicone or Fluorovinylmethylsiloxane Rubber**

**Hardness Range** 35 to 80 Durometer Shore A

**Temperature Range** - 65° C to + 200° C

**Advantages** in performance...

- for adhesion to metal, resilience & rebound, and in certain formulations, tear resistance.
- in dilute acids, alcohol's, dilute alkalis, animal & vegetable oils, diester oils, aryl phosphate esters, fuels including aliphatic hydrocarbons, aromatic hydrocarbons, extend or oxygenated fuels, halogenated solvents, LP gases & fuel oils, refrigerant ammonia, silicone oils, and selected solvents.
- for coloring capability, flame resistance, ozone resistance, oxidation resistance radiation resistance, sunlight resistance, weather resistance, and water resistance.

**Limitations** in performance...

- for abrasion resistance, flex cracking resistance, impact resistance, and in certain formulations, tear resistance.
- in amines, brake fluids, alkyl phosphate esters, ketones, and lacquer solvents.
- for gas permeability.

## ***Rubber Material Selection Guide FVMQ or Fluorosilicone Rubber***

- Abbreviation FVMQ
- ASTM D-2000 Classification FK
- Chemical Definition Fluorovinyl Methyl Silioxane

### **◆ Physical & Mechanical Properties**

• Durometer or Hardness Range	35 – 80 Shore A
• Tensile Strength Range	200 – 1,500 PSI
• Elongation (Range %)	100 % – 480 %
• Abrasion Resistance	Poor
• Adhesion to Metal	Good
• Adhesion to Rigid Materials	Fair to Good
• Compression Set	Fair to Good
• Flex Cracking Resistance	Poor to Good
• Impact Resistance	Poor to Good
• Resilience / Rebound	Poor to Fair
• Tear Resistance	Poor to Good
• Vibration Dampening	Good

**◆ Chemical Resistance**

- |                                 |                   |
|---------------------------------|-------------------|
| • Acids, Dilute                 | Excellent         |
| • Acids, Concentrated           | Good              |
| • Acids, Organic (Dilute)       | Good              |
| • Acids, Organic (Concentrated) | Fair              |
| • Acids, Inorganic              | Fair              |
| • Alcohol's                     | Fair to Excellent |

***Rubber Material Selection Guide FVMQ or Fluorosilicone Rubber*****◆ Chemical Resistance**

- |  |                   |
|--|-------------------|
| • Aldehydes                            | Poor              |
| • Alkalies, Dilute                     | Excellent         |
| • Alkalies, Concentrated               | Good              |
| • Amines                               | Poor              |
| • Animal & Vegetable Oils              | Excellent         |
| • Brake Fluids, Non-Petroleum Based    | Poor              |
| • Diester Oils                         | Good to Excellent |
| • Esters, Alkyl Phosphate              | Poor to Fair      |
| • Esters, Aryl Phosphate               | Good to Excellent |
| • Ethers                               | Fair              |
| • Fuel, Aliphatic Hydrocarbon          | Excellent         |
| • Fuel, Aromatic Hydrocarbon           | Good to Excellent |
| • Fuel, Extended (Oxygenated)          | Excellent         |
| • Halogenated Solvents                 | Good to Excellent |
| • Hydrocarbon, Halogenated             | Good to Very Good |
| • Ketones                              | Poor              |
| • Lacquer Solvents                     | Poor              |
| • LP Gases & Fuel Oils                 | Excellent         |
| • Mineral Oils                         | Good to Excellent |
| • Oil Resistance                       | Good              |
| • Petroleum Aromatic                   | Good              |
| • Petroleum Non-Aromatic               | Good              |
| • Refrigerant Ammonia                  | Excellent         |
| • Refrigerant Halofluorocarbons        | R-11, R-12        |
| • Refrigerant Halofluorocarbons w/ Oil | R-11, R-12        |
| • Silicone Oil                         | Excellent         |
| • Solvent Resistance                   | Excellent         |

## ***Rubber Material Selection Guide FVMQ or Fluorosilicone Rubber***

### **◆ Environmental Performance**

• Colorability	Good to Excellent
• Flame Resistance	Excellent
• Gas Permeability	Poor to Good
• Odor	Good
• Ozone Resistance	Excellent
• Oxidation Resistance	Excellent
• Radiation Resistance	Fair to Excellent
• Steam Resistance	Fair
• Sunlight Resistance	Excellent
• Taste Retention	Good
• Weather Resistance	Excellent
• Water Resistance	Excellent

For assistance in identifying the appropriate polymer or material, or to develop and formulate a fluorosilicone rubber compound to meet your specific application and performance requirements, please contact ILGA S.R.L at e-mail: [ilga@ilgagomma.com](mailto:ilga@ilgagomma.com) or phone: +39 0456336521 / 0456336514.

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