Rubber Material Selection Guide
FKM or Fluorocarbon / Fluoroelastomer
Viton® / Fluorel®

- Abbreviation: FKM
- ASTM D-2000 Classification: HK
- Chemical Definition: Vinylidienefluoridehexafluoropropylene
- RRP Compound Number Category: 90000 Series

Physical & Mechanical Properties
- Durometer or Hardness Range: 50 – 95 Shore A
- Tensile Strength Range: 500 – 2,000 PSI
- Elongation (Range %): 400 % – 500 %
- Abrasion Resistance: Fair to Good
- Adhesion to Metal: Good to Excellent
- Adhesion to Rigid Materials: Fair to Good
- Compression Set: Good to Excellent
- Flex Cracking Resistance: Fair to Good
- Impact Resistance: Good
- Resilience / Rebound: Poor to Fair
- Tear Resistance: Fair to Good
- Vibration Dampening: Fair to Good

Chemical Resistance
- Acids, Dilute: Good to Excellent
- Acids, Concentrated: Good to Excellent
- Acids, Organic (Dilute): Fair to Good
- Acids, Organic (Concentrated): Poor to Good
- Acids, Inorganic: Good to Excellent
Chemical Resistance

- Alcohol's: Fair to Excellent
- Aldehydes: Poor
- Alkalies, Dilute: Fair to Good
- Alkalies, Concentrated: Poor
- Amines: Poor
- Animal & Vegetable Oils: Excellent
- Brake Fluids, Non-Petroleum Based: Poor to Fair
- Diester Oils: Good to Excellent
- Esters, Alkyl Phosphate: Poor
- Esters, Aryl Phosphate: Excellent
- Ethers: Poor
- Fuel, Aliphatic Hydrocarbon: Excellent
- Fuel, Aromatic Hydrocarbon: Excellent
- Fuel, Extended (Oxygenated): Excellent
- Halogenated Solvents: Good to Excellent
- Hydrocarbon, Halogenated: Good to Excellent
- Ketones: Poor
- Lacquer Solvents: Poor
- LP Gases & Fuel Oils: Excellent
- Mineral Oils: Excellent
- Oil Resistance: Excellent
- Petroleum Aromatic: Excellent
- Petroleum Non-Aromatic: Excellent
- Refrigerant Ammonia: Poor
- Refrigerant Halofluorocarbons: R-11, R-12, R-13
- Refrigerant Halofluorocarbons w/ Oil: R-11, R-12
- Silicone Oil: Excellent
- Solvent Resistance: Excellent
Rubber Material Selection Guide
FKM or Fluorocarbon / Fluoroelastomer
Viton® / Fluorel®

♦ Thermal Properties
  - Low Temperature Range: -30º F to 0º F
  - Minimum for Continuous Use (Static): + 10º F to -30º F
  - Brittle Point: 0º F to -40º F
  - High Temperature Range: + 450º F to + 500º F
  - Maximum for Continuous Use (Static): + 500º F

♦ Environmental Performance
  - Colorability: Good to Excellent
  - Flame Resistance: Good to Excellent
  - Gas Permeability: Good to Excellent
  - Odor: Good
  - Ozone Resistance: Excellent
  - Oxidation Resistance: Excellent
  - Radiation Resistance: Fair to Good
  - Steam Resistance: Good to Excellent
  - Sunlight Resistance: Good to Excellent
  - Taste Retention: Fair to Good
  - Weather Resistance: Excellent
  - Water Resistance: Excellent

For assistance in identifying the appropriate polymer or material, or to develop and formulate a fluorocarbon / fluoroelastomer rubber compound to meet your specific application and performance requirements, please contact Robinson Rubber Products at e-mail: sales@robinsonrubber.com or phone: 1-763-535-6737.

Robinson Rubber Products Company, Inc. makes no expressed or implied warranty as to any qualities, attributes, or characteristics of any polymer or material. This information is provided for reference only.

Viton® is a registered trademark of the DuPont Corporation.
Fluorel® is a registered trademark of Dyneon, a division of the 3M Company.