

# Fluoroelastomer (Viton®)

ASTM D1418 & ISO 1629 Designation: **FKM**  
ASTM D2000, SAE J200 Type/Class: **HK**  
Mil-R-3065 (Mil-Std 417) Class: **TB**



**Advantages:** High heat resistance; resistant to oil and almost all inorganic chemicals and organic compounds, excellent resistance to oxygen, ozone and natural weathering. Self extinguishing and flame retardant. Excellent compression set.

**Limitations:** Electrically conductive; relatively expensive; low resilience, poor low temperature flexibility.

## 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

## Thermal Properties

General Temperature Range -30°F to 572°F  
Min. for continuous Use (Static): -30°F  
Brittle Point: -40°F  
Max. for Continuous Use (Static): 572°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  
Weather Resistance: Excellent  
Water Resistance: Excellent

## Chemical Resistance

Acids, Dilute: Good to Excellent  
Acids, Concentrated: Good to Excellent  
Acids, Organic (Dilute): Fair to Good  
Acids, Organic (Concentrated): Poor to Good  
Alcohols: Poor  
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  
Esters: Poor  
Fuel, Aliphatic Hydrocarbon: Excellent  
Fuel, Aromatic Hydrocarbon: Excellent  
Fuel, Extended (Oxygenated): Excellent  
Halogenated Solvents: Good to Excellent  
Hydrocarbon, Halogenated: Good to Excellent  
Ketones (MEK, acetone): Poor  
Lacquer Solvents: Poor  
LP Gases & Fuel Oils: Excellent  
Mineral Oils: Excellent  
Oil Resistance: Excellent  
Petroleum Aromatic: Good to 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