

Ethylene Propylene (EPDM)

ASTM D1418 & ISO 1629 Designation: EPDM, EPM

ASTM D2000, SAE J200 Type/Class: AA, BA, CA, DA

Mil-R-3065 (Mil-Std 417) Class: RS



Advantages: Excellent inherent high & low temperature ranges (higher heat resistance than other hydrocarbon rubbers; inherently resistant to oxygen, ozone, UV, and extreme weather environments; high ageing resistance; good resistance to many chemicals and solvents; vulcanizable by both peroxid and sulphur; easily processed.

Limitations: Lack of Tack; poor adhesion properties; unsuitable for most organic liquids and oils.

Physical & Mechanical Properties

Durometer or Hardness Range: 30-90 Shore A
Tensile Strength Range: 500 - 2,500 PSI
Elongation (Range%): 100% - 700%
Abrasion Resistance: Good
Adhesion to Metal: Fair to Good
Adhesion to Rigid Materials: Good to Excellent
Compression Set: Good
Flex Cracking Resistance: Good
Impact Resistance: Very Good
Resilience/Rebound: Fair to Good
Tear Resistance: Fair to Good
Vibration Dampening: Fair to Good

Thermal Properties

General Temperature Range -60°F to 300°F
Min. for continuous Use (Static): -60°F
Brittle Point: -70°F
Max. for Continuous Use (Static): 300°F

Environmental Performance

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

Chemical Resistance

Acids, Dilute: Excellent
Acids, Concentrated: Excellent
Acids, Organic (Dilute): Excellent
Acids, Organic (Concentrated): Fair to Good
Alcohols: Good to Excellent
Aldehydes: Good to Excellent
Alkalies, Dilute: Excellent
Alkalies, Concentrated: Excellent
Amines: Fair to Good
Animal & Vegetable Oils: Good
Brake Fluids, Non-Petroleum Based: Good to Excellent
Diester Oils: Poor
Esters, Alkyl Phosphate: Excellent
Esters, Aryl Phosphate: Excellent
Esters: Fair
Fuel, Aliphatic Hydrocarbon: Poor
Fuel, Aromatic Hydrocarbon: Poor
Fuel, Extended (Oxygenated): Poor
Halogenated Solvents: Poor
Hydrocarbon, Halogenated: Poor
Ketones (MEK, acetone): Good to Excellent
Lacquer Solvents: Poor
LP Gases & Fuel Oils: Poor
Mineral Oils: Poor
Oil Resistance: Poor
Petroleum Aromatic: Poor
Petroleum Non-Aromatic: Poor
Refrigerant Ammonia: Good
Refrigerant Halofluorocarbons: R-12, R-13
Refrigerant Halofluorocarbons w/ Oil: Poor
Silicone Oil: Excellent
Solvent Resistance: Poor