

Rubber Material Selection Guide

EPDM or Ethylene Propylene

Abbreviation	EP, EPR, EPT, EPDM
Chemical Definition	Ethylene Propylene Diene

Physical & Mechanical Properties

Durometer or Hardness Range	30 – 90 Shore A
Tensile Strength Range	3.45 – 17.24 MPa
Elongation (Range %)	100 % –700 %
Abrasion Resistance	Good
Adhesion to Metal	Good to Excellent
Adhesion to Rigid Materials	Good to Excellent
Compression Set	Poor to Excellent
Flex Cracking Resistance	Good
Impact Resistance	Very Good
Resilience / Rebound	Fair to Good
Tear Resistance	Fair to Good
Vibration Dampening	Fair to Good

Chemical Resistance

Acids, Dilute	Excellent
Acids, Concentrated	Excellent
Acids, Organic (Dilute)	Excellent
Acids, Organic (Concentrated)	Fair to Good
Acids, Inorganic	Excellent
Alcohol's	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
Ethers	Fair
Fuel, Aliphatic Hydrocarbon	Poor
Fuel, Aromatic Hydrocarbon	Poor
Halogenated Solvents	Poor
Hydrocarbon, Halogenated	Poor
Ketones	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
Silicone Oil	Excellent
Solvent Resistance	Poor

Thermal Properties

Low Temperature Range	-51°C to -40°C
Minimum for Continuous Use (Static)	-51°C
Brittle Point	-57°C
High Temperature Range	+104°C to +149°C
Maximum for Continuous Use (Static)	+149°C

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

For assistance in identifying the appropriate polymer or material, or to develop and formulate a rubber compound to meet your specific application and performance requirements, please contact Zeta Chemicals.