EP- Ethylene Propylene Rubber, EPR, EPT, EPDM

Hardness Range 30 to 90 Durometer Shore A
Temperature Range - 50º C to + 130º C

Advantages in performance…

- for adhesion to metal & rigid materials and compression set.
- in performance in most acids, alcohol's, aldehydes, alkalis, brake fluids, esters, ketones, and silicone oils.
- in performance for coloring capabilities, ozone resistance, oxidation resistance, steam resistance, sunlight resistance, taste retention, weather resistance, and water resistance.

Limitations in performance…

- in diester oils, petroleum based fuels & oils including aliphatic hydrocarbons, aromatic & non-aromatic hydrocarbons, extended or oxygenated fuels.
- as well as halogenated solvents, halogenated hydrocarbons, lacquer solvents, LP gases & fuels, mineral oils, refrigerant halofluorocarbons with oil, and flame resistance.

Rubber Material Selection Guide EPDM or Ethylene Propylene

- Abbreviation EP, EPR, EPT, EPDM
- ASTM D-2000 Classification AA, BA, CA, DA
- Chemical Definition ethylene propylene diene

♦ 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	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

Rubber Material Selection Guide EPDM or Ethylene Propylene

♦ **Chemical Resistance**

• 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
• Fuel, Extended (Oxygenated)	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
• Refrigerant Halofluorocarbons	R-12, R-13
• Refrigerant Halofluorocarbons w/ Oil	Poor
• Silicone Oil	Excellent
• Solvent Resistance	Poor

Rubber Material Selection Guide EPDM or Ethylene Propylene

♦ 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
• Taste Retention	Good to Excellent
• Weather Resistance	Excellent
• Water Resistance	Excellent

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