Zeta Kimya
RUBBER COMPOUNDS

05/01/2016

Rubber Material Selection Guide
ECO or Epichlorohydrin

Abbreviation	ECO
Chemical Definition	Epichlorohydrin

Physical & Mechanical Properties

Durometer or Hardness Range	40 – 90 Shore A
Tensile Strength Range	3.45 – 17.24 MPa
Elongation (Range %)	200 % – 800 %
Abrasion Resistance	Fair to Good
Adhesion to Metal	Fair to Good
Adhesion to Rigid Materials	Fair to Excellent
Compression Set	Good to Excellent
Flex Cracking Resistance	Good
Impact Resistance	Fair to Excellent
Resilience / Rebound	Good
Tear Resistance	Fair to Excellent
Vibration Dampening	Good

Chemical Resistance

Acids, Dilute	Good
Acids, Concentrated	Poor to Fair
Acids, Organic (Dilute)	Fair
Acids, Organic (Concentrated)	Poor
Acids, Inorganic	Fair to Good
Alcohol's	Fair to Good
Aldehydes	Poor
Alkalies, Dilute	Poor
Alkalies, Concentrated	Fair to Good
Amines	Poor to Good
Animal & Vegetable Oils	Excellent
Brake Fluids, Non-Petroleum Based	Poor
Diester Oils	Poor to Good
Esters, Alkyl Phosphate	Poor
Esters, Aryl Phosphate	Poor
Ethers	Good
Fuel, Aliphatic Hydrocarbon	Good to Excellent
Fuel, Aromatic Hydrocarbon	Good to Excellent
Halogenated Solvents	Poor
Hydrocarbon, Halogenated	Excellent
Ketones	Fair
Lacquer Solvents	Fair
LP Gases & Fuel Oils	Excellent
Mineral Oils	Excellent
Oil Resistance	Excellent
Petroleum Aromatic	Good to Excellent
Petroleum Non-Aromatic	Poor
Refrigerant Ammonia	Poor
Silicone Oil	Good to Excellent
Solvent Resistance	Good to Excellent

Thermal Properties

Low Temperature Range	-51°C to -34°C
Minimum for Continuous Use (Static)	-51°C
Brittle Point	-62°C to -40°C
High Temperature Range	+121°C to +135°C
Maximum for Continuous Use (Static)	+135°C

Environmental Performance

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

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.

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