

## Rubber Material Selection Guide

### *SBR or Styrene Butadiene*

Abbreviation	SBR
Chemical Definition	Styrene Butadiene

#### Physical & Mechanical Properties

Durometer or Hardness Range	30 – 95 Shore A
Tensile Strength Range	3.45 – 20.68 MPa
Elongation (Range %)	450 % – 600 %
Abrasion Resistance	Excellent
Adhesion to Metal	Excellent
Adhesion to Rigid Materials	Excellent
Compression Set	Good to Excellent
Flex Cracking Resistance	Good
Impact Resistance	Excellent
Resilience / Rebound	Good
Tear Resistance	Fair to Excellent
Vibration Dampening	Fair to Good

#### Chemical Resistance

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

#### Thermal Properties

Low Temperature Range	-51°C to -34°C
Minimum for Continuous Use (Static)	-51°C
Brittle Point	-62°C
High Temperature Range	+99°C to +121°C
Maximum for Continuous Use (Static)	+107°C

#### Environmental Performance

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