Rubber Material Selection Guide
BR or Polybutadiene

- Abbreviation: BR
- ASTM D-2000 Classification: AA
- Chemical Definition: Polybutadiene
- RRP Compound Number Category: 13-0000 Series

Physical & Mechanical Properties
- Durometer or Hardness Range: 45 – 80 Shore A
- Tensile Strength Range: 500 – 2,000 PSI
- Elongation (Range %): 450 % – 650 %
- Abrasion Resistance: Fair to Excellent
- Adhesion to Metal: Good
- Adhesion to Rigid Materials: Fair to Good
- Compression Set: Good to Excellent
- Flex Cracking Resistance: Fair to Excellent
- Impact Resistance: Poor to Good
- Resilience / Rebound: Fair to Excellent
- Tear Resistance: Poor to Good
- Vibration Dampening: Fair to Good

Chemical Resistance
- Acids, Dilute: Fair to Good
- Acids, Concentrated: Fair to Good
- Acids, Organic (Dilute): Good
- Acids, Organic (Concentrated): Poor
- Acids, Inorganic: Good
Chemical Resistance

- Alcohol's: Fair to Good
- Aldehydes: Good
- 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
- Fuel, Extended (Oxygenated): Poor
- Halogenated Solvents: Poor
- Hydrocarbon, Halogenated: Poor
- Ketones: 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
- Refrigerant Halofluorocarbons: R-12, R-13
- Refrigerant Halofluorocarbons w/ Oil: Poor
- Silicone Oil: Poor
- Solvent Resistance: Poor
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♦ Thermal Properties
  - Low Temperature Range - 150° F to - 100° F
  - Minimum for Continuous Use (Static) - 90° F
  - Brittle Point - 100° F
  - High Temperature Range + 180° F to + 220°
  - Maximum for Continuous Use (Static) + 200° F

♦ Environmental Performance
  - Colorability Good
  - Flame Resistance Poor
  - Gas Permeability Good
  - Odor Good
  - Ozone Resistance Poor
  - Oxidation Resistance Good to Excellent
  - Radiation Resistance Poor
  - Steam Resistance Fair to Good
  - Sunlight Resistance Poor
  - Taste Retention Fair to Good
  - Weather Resistance Poor to Good
  - Water Resistance Good to Excellent

For assistance in identifying the appropriate polymer or material, or to develop and formulate a polyacrylate / acrylic rubber compound to meet your specific application and performance requirements, please contact Robinson Rubber Products at e-mail: sales@robinsonrubber.com or phone: +1-763-535-6737.

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