Rubber Material Selection Guide
IIR or Butyl
Isobutylene Isoprene Rubber

■ Abbreviation	IIR
■ ASTM D-2000 Classification	AA, BA, CA
■ Chemical Definition	Isobutylene Isoprene
■ RRP Compound Number Category	50000 Series

Physical & Mechanical Properties

■ Durometer or Hardness Range	40 – 90 Shore A
■ Tensile Strength Range	500 – 3,000 PSI
■ Elongation (Range %)	300 % – 850 %
■ Abrasion Resistance	Fair to Good
■ Adhesion to Metal	Good
■ Adhesion to Rigid Materials	Fair to Good
■ Compression Set	Fair to Good
■ Flex Cracking Resistance	Good to Excellent
■ Impact Resistance	Good
■ Resilience / Rebound	Fair to Good
■ Tear Resistance	Good
■ Vibration Dampening	Excellent

Chemical Resistance

■ Acids, Dilute	Good to Excellent
■ Acids, Concentrated	Fair to Excellent
■ Acids, Organic (Dilute)	Good
■ Acids, Organic (Concentrated)	Fair to Good

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Chemical Resistance

Alcohol's	Poor
Aldehydes	Poor
Alkalies, Dilute	Fair
Alkalies, Concentrated	Fair
Amines	Poor
Animal & Vegetable Oils	Good
Brake Fluids, Non-Petroleum Based	Poor
Diester Oils	Good
Esters, Alkyl Phosphate	Poor
Esters, Aryl Phosphate	Poor
Ethers	Poor
Fuel, Aliphatic Hydrocarbon	Excellent
Fuel, Aromatic Hydrocarbon	Poor to Good
Fuel, Extended (Oxygenated)	Fair to Good
Halogenated Solvents	Poor to Good
Hydrocarbon, Halogenated	Poor to Good
Ketones	Poor to Good
Lacquer Solvents	Poor to Good
LP Gases & Fuel Oils	Good
Mineral Oils	Good to Excellent
Oil Resistance	Excellent
Petroleum Aromatic	Fair
Petroleum Non-Aromatic	Good
Refrigerant Ammonia	Fair
Refrigerant Halofluorocarbons	R-11, R-12, R-13
Refrigerant Halofluorocarbons w/ Oil	R-11, R-12, R-13, R-22
Silicone Oil	Excellent
Solvent Resistance	Good

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Thermal Properties

Low Temperature Range	- 30º F to 0º F
Minimum for Continuous Use (Static)	- 30º F
Brittle Point	- 40º F
High Temperature Range	+ 350º F to + 400º F
Maximum for Continuous Use (Static)	+ 400º F

Environmental Performance

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