Rubber Material Selection Guide
Urethanes
AU – Polyester Urethane or Polyether Urethane

Abbreviation	AU or EU
ASTM D-2000 Classification	BG
Chemical Definition	Polyester / Polyether Urethane
RRP Compound Number Category	60000 Series

Physical & Mechanical Properties

Durometer or Hardness Range	35 – 95 Shore A
Tensile Strength Range	500 – 6,000 PSI
Elongation (Range %)	250 % – 900 %
Abrasion Resistance	Excellent
Adhesion to Metal	Excellent
Adhesion to Rigid Materials	Good
Compression Set	Poor to Good
Flex Cracking Resistance	Fair to Good
Impact Resistance	Good to Excellent
Resilience / Rebound	Poor to Good
Tear Resistance	Good to Excellent
Vibration Dampening	Fair to Good

Chemical Resistance

Acids, Dilute	Fair to Good
Acids, Concentrated	Poor
Acids, Organic (Dilute)	Fair
Acids, Organic (Concentrated)	Poor
Acids, Inorganic	Poor to Fair
Alcohol’s	Good

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Chemical Resistance

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

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Thermal Properties

■ Low Temperature Range	- 65º F to - 40º F
■ Minimum for Continuous Use (Static)	- 65º F
■ Brittle Point	- 60º F to - 80º F
■ High Temperature Range	+ 180º F to + 220º F
■ Maximum for Continuous Use (Static)	+ 200º F

Environmental Performance

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

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.