

Rubber Material Selection Guide

ACM or Polyacrylate

Acrylic Rubber

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|--------------------------------|--------------------------------|
| ▪ Abbreviation | ACM |
| ▪ ASTM D-2000 Classification | DF, DH |
| ▪ Chemical Definition | Copolymer Ethyl Butyl Acrylate |
| ▪ RRP Compound Number Category | 12-0000 Series |

◆ Physical & Mechanical Properties

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|-------------------------------|-------------------|
| ▪ Durometer or Hardness Range | 40 – 90 Shore A |
| ▪ Tensile Strength Range | 500 – 2,500 PSI |
| ▪ Elongation (Range %) | 100 % – 450 % |
| ▪ Abrasion Resistance | Fair to Good |
| ▪ Adhesion to Metal | Fair to Good |
| ▪ Adhesion to Rigid Materials | Fair to Good |
| ▪ Compression Set | Poor to Good |
| ▪ Flex Cracking Resistance | Fair to Good |
| ▪ Impact Resistance | Poor |
| ▪ Resilience / Rebound | Fair to Good |
| ▪ Tear Resistance | Poor to Good |
| ▪ Vibration Dampening | Good to Excellent |

◆ Chemical Resistance

- | | |
|---------------------------------|--------------|
| ▪ Acids, Dilute | Fair |
| ▪ Acids, Concentrated | Poor to Fair |
| ▪ Acids, Organic (Dilute) | Poor |
| ▪ Acids, Organic (Concentrated) | Poor |
| ▪ Acids, Inorganic | Fair |

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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

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

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