ACM - Polyacrylate or Acrylic Rubber

Hardness Range 40 to 90 Durometer Shore A
Temperature Range - 30º C to + 160º C

Advantages in performance…

- for vibration dampening.
- in aliphatic hydrocarbon fuels, mineral oils, and silicone oil.
- for gas permeability, ozone resistance, oxidation resistance, sunlight resistance, weather resistance, and water resistance.

Limitations in performance…

- for compression set, impact resistance, and tear resistance.
- in concentrated acids, dilute organic acids, concentrated organic acids, alcohols, aldehydes, amines, brake fluids, alkyl phosphate esters, aryl phosphate esters, ethers, aromatic hydrocarbon fuels, halogenated solvents, halogenated hydrocarbons, ketones, and lacquer solvents.
- for flame resistance, radiation resistance, and steam resistance.

Rubber Material Selection Guide ACM or Polyacrylate Acrylic Rubber

- Abbreviation ACM
- ASTM D-2000 Classification DF, DH
- Chemical Definition Copolymer Ethyl Butyl Acrylate

♦ Physical & Mechanical Properties

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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♦ 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 ILGA S.R.L at e-mail: ilga@ilgagomma.com or phone: +39 0456336521 / 0456336514.