

# Polyacrylate Acrylic Rubber (ACM)

ASTM D1418 & ISO 1629 Designation: **ACM, ANM**

ASTM D2000, SAE J200 Type/Class: **DF, DH**

Mil-R-3065 (Mil-Std 417) Class: **TB**



**Advantages:** Good resistance to high temperatures in both air and oil environments; ozone and oxygen and light resistant.

**Limitations:** Poor chemical resistance, poor water and moisture resistance, physical properties generally low, poor resistance to acids and bases, difficult to process.

## **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

## **Thermal Properties**

General Temperature Range -30°F to 400°F  
Min. for continuous Use (Static): -30°F  
Brittle Point: -40°F  
Max. 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: Good to Excellent  
Radiation Resistance: Poor to Good  
Steam Resistance: Poor  
Sunlight Resistance: Good to Excellent  
Weather Resistance: Excellent  
Water Resistance: Excellent

## **Chemical Resistance**

Acids, Dilute: Fair  
Acids, Concentrated: Poor to Fair  
Acids, Organic (Dilute): Poor  
Acids, Organic (Concentrated): Poor  
Alcohols: 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  
Esters: 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 (MEK, acetone): 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, R22  
Silicone Oil: Excellent  
Solvent Resistance: Good