

Natural Rubber (Pure Gum)

ASTM D1418 & ISO 1629 Designation: **NR**

ASTM D2000, SAE J200 Type/Class: **AA**

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



Advantages: Excellent dynamic, mechanical and fatigue properties; high strength, resilience and abrasion properties.

Limitations: Suffers from poor oxidation, ozone, oil and solvent resistance. Temperature resistance is also relatively poor.

Physical & Mechanical Properties

Durometer or Hardness Range: 30-95 Shore A
Tensile Strength Range: 500 - 3,500 PSI
Elongation (Range%): 300% - 800%
Abrasion Resistance: Good to Excellent
Adhesion to Metal: Excellent
Adhesion to Rigid Materials: Excellent
Compression Set: Excellent
Flex Cracking Resistance: Excellent
Impact Resistance: Good to Excellent
Resilience/Rebound: Excellent
Tear Resistance: Good to Excellent
Vibration Dampening: Good to Excellent

Thermal Properties

General Temperature Range -70°F to 250°F
Min. for continuous Use (Static): -60°F
Brittle Point: -80°F
Max. for Continuous Use (Static): 220°F

Environmental Performance

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

Chemical Resistance

Acids, Dilute: Fair to Excellent
Acids, Concentrated: Poor to Good
Acids, Organic (Dilute): Fair to Good
Acids, Organic (Concentrated): Good
Alcohols: Good to Excellent
Aldehydes: Good
Alkalies, Dilute: Fair to Excellent
Alkalies, Concentrated: Fair to Good
Amines: Poor to Fair
Animal & Vegetable Oils: Poor to Good
Brake Fluids, Non-Petroleum Based: Good
Diester Oils: Poor
Esters, Alkyl Phosphate: Poor
Esters, Aryl Phosphate: Poor
Esters: Poor
Fuel, Aliphatic Hydrocarbon: Poor
Fuel, Aromatic Hydrocarbon: Poor
Fuel, Extended (Oxygenated): Poor
Halogenated Solvents: Poor
Hydrocarbon, Halogenated: Poor
Ketones (MEK, acetone): Fair to Good
Lacquer Solvents: Poor
LP Gases & Fuel Oils: Poor
Mineral Oils: Poor
Oil Resistance: Poor
Petroleum Aromatic: Poor
Petroleum Non-Aromatic: Poor
Refrigerant Ammonia: Good
Refrigerant Halofluorocarbons: R-12, R13
Refrigerant Halofluorocarbons w/ Oil: Poor
Silicone Oil: Good
Solvent Resistance: Fair