

Polychloroprene Rubber - Neoprene®

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

ASTM D2000, SAE J200 Type/Class: **BA, BC**

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



Advantages: Excellent mechanical and abrasion properties; high ozone and weather resistance; good heat ageing resistance; low flammability; good resistance to chemicals and inorganic chemical products; moderate oil and fuel resistance; adhesion to many substrates. Flame retardant grades available.

Limitations: Relatively high water absorption; some grades crystallize at low ambient temperatures; only reasonable resilience; poor hydrocarbon resistance.

Physical & Mechanical Properties

Durometer or Hardness Range: 20-95 Shore A
Tensile Strength Range: 500 - 3,000 PSI
Elongation (Range%): 100% - 800%
Abrasion Resistance: Very Good to Excellent
Adhesion to Metal: Excellent
Adhesion to Rigid Materials: Good to Excellent
Compression Set: Poor to Good
Flex Cracking Resistance: Good
Impact Resistance: Good to Excellent
Resilience/Rebound: Fair to Good
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): -70°F
Brittle Point: -85°F
Max. for Continuous Use (Static): 250°F

Environmental Performance

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

Chemical Resistance

Acids, Dilute: Excellent
Acids, Concentrated: Poor
Acids, Organic (Dilute): Good to Excellent
Acids, Organic (Concentrated): Poor to Good
Alcohols: Excellent
Aldehydes: Poor to Fair
Alkalies, Dilute: Good
Alkalies, Concentrated: Poor
Amines: Poor to Good
Animal & Vegetable Oils: Good
Brake Fluids, Non-Petroleum Based: Fair
Diester Oils: Poor
Esters, Alkyl Phosphate: Poor
Esters, Aryl Phosphate: Poor to Fair
Esters: Poor
Fuel, Aliphatic Hydrocarbon: Poor to Good
Fuel, Aromatic Hydrocarbon: Poor to Fair
Fuel, Extended (Oxygenated): Fair
Halogenated Solvents: Poor
Hydrocarbon, Halogenated: Poor
Ketones (MEK, acetone): Poor to Fair
Lacquer Solvents: Poor
LP Gases & Fuel Oils: Good
Mineral Oils: Fair to Good
Oil Resistance: Fair
Petroleum Aromatic: Good
Petroleum Non-Aromatic: Good
Refrigerant Ammonia: Excellent
Refrigerant Halofluorocarbons: R-11, R-12, R-13, R21, R22
Refrigerant Halofluorocarbons w/ Oil: R-11, R-12, R22
Silicone Oil: Fair to Excellent
Solvent Resistance: Fair