

# Epichlorohydrin Rubber (ECO)

ASTM D1418 & ISO 1629 Designation: **CO, ECO**

ASTM D2000, SAE J200 Type/Class: **BG, BK, CE, CH, DH, DJ, DK**

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



**Advantages:** Resistant to ozone, weathering and oils; good heat resistance; very low permeability to gasses; fire resistant and flame retardant.

**Limitations:** Electrically conductive; relatively expensive; low resilience; limited resistance to most organic chemicals can be corrosive.

## Physical & Mechanical Properties

Durometer or Hardness Range: 45-95 Shore A  
Tensile Strength Range: 1,000 - 3,000 PSI  
Elongation (Range%): 200% - 800%  
Abrasion Resistance: Fair to Good  
Adhesion to Metal: Good  
Adhesion to Rigid Materials: Good to Excellent  
Compression Set: Good to Excellent  
Flex Cracking Resistance: Good to Excellent  
Impact Resistance: Fair to Good  
Resilience/Rebound: Good to Very Good  
Tear Resistance: Fair to Excellent  
Vibration Dampening: Good

## Thermal Properties

General Temperature Range -65°F to 275°F  
Min. for continuous Use (Static): -60°F  
Brittle Point: -70°F  
Max. for Continuous Use (Static): 275°F

## Environmental Performance

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

## Chemical Resistance

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