

Rubber Material Selection Guide **CR or Neoprene®** **Polychloroprene**

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|--------------------------------|-----------------|
| ▪ Abbreviation | CR |
| ▪ ASTM D-2000 Classification | BC, BE |
| ▪ Chemical Definition | Polychloroprene |
| ▪ RRP Compound Number Category | 20000 Series |

◆ Physical & Mechanical Properties

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|-------------------------------|------------------------|
| ▪ 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 |

◆ Chemical Resistance

- | | |
|---------------------------------|-------------------|
| ▪ Acids, Dilute | Excellent |
| ▪ Acids, Concentrated | Poor |
| ▪ Acids, Organic (Dilute) | Good to Excellent |
| ▪ Acids, Organic (Concentrated) | Poor to Good |
| ▪ Acids, Inorganic | Good to Excellent |

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◆ **Chemical Resistance**

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|--|------------------------------|
| ▪ Alcohol's | 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 |
| ▪ Ethers | Poor |
| ▪ Fuel, Aliphatic Hydrocarbon | Poor to Good |
| ▪ Fuel, Aromatic Hydrocarbon | Poor to Fair |
| ▪ Fuel, Extended (Oxygenated) | Fair |
| ▪ Halogenated Solvents | Poor |
| ▪ Hydrocarbon, Halogenated | Poor |
| ▪ Ketones | 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, R-21, R-22 |
| ▪ Refrigerant Halofluorocarbons w/ Oil | R-11, R-12, R-22 |
| ▪ Silicone Oil | Fair to Excellent |
| ▪ Solvent Resistance | Fair |

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◆ **Thermal Properties**

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|---------------------------------------|--------------------|
| ▪ Low Temperature Range | - 70° F to - 30° F |
| ▪ Minimum for Continuous Use (Static) | - 80° F |
| ▪ Brittle Point | - 85° F |
| ▪ High Temperature Range | + 200° F to + 250° |
| ▪ Maximum 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 | Fair to Good |
| ▪ Sunlight Resistance | Good to Excellent |
| ▪ Taste Retention | Fair to Good |
| ▪ Weather Resistance | Fair to Good |
| ▪ Water Resistance | Fair to Good |

For assistance in identifying the appropriate polymer or material, or to develop and formulate a CR or Neoprene / polychloroprene rubber compound to meet your specific application and performance requirements, please contact Robinson Rubber Products at e-mail: sales@robinsonrubber.com or phone: + 1-763-535-6737.

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