



Rubber Material Selection Guide XNBR or Carboxylated Nitrile

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|--------------------------------|----------------------|
| ■ Abbreviation | XNBR |
| ■ ASTM D-2000 Classification | BF, BG, BK |
| ■ Chemical Definition | Carboxylated Nitrile |
| ■ RRP Compound Number Category | 30000 Series |

Physical & Mechanical Properties

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|-------------------------------|-------------------|
| ■ Durometer or Hardness Range | 50 – 90 Shore A |
| ■ Tensile Strength Range | 1,000 – 3,500 PSI |
| ■ Elongation (Range %) | 250 % – 600 % |
| ■ Abrasion Resistance | Excellent |
| ■ Adhesion to Metal | Good to Excellent |
| ■ Adhesion to Rigid Materials | Good to Excellent |
| ■ Compression Set | Fair to Good |
| ■ Flex Cracking Resistance | Fair |
| ■ Impact Resistance | Good to Excellent |
| ■ Resilience / Rebound | Fair to Good |
| ■ Tear Resistance | Excellent |
| ■ Vibration Dampening | Fair to Good |

Chemical Resistance

- | | |
|---------------------------------|--------------|
| ■ Acids, Dilute | Good |
| ■ Acids, Concentrated | Fair to Good |
| ■ Acids, Organic (Dilute) | Good |
| ■ Acids, Organic (Concentrated) | Poor |
| ■ Acids, Inorganic | Fair to Good |
| ■ Alcohol's | Fair to Good |

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Chemical Resistance

■ Alcohol's	Fair to Good
■ Aldehydes	Good
■ Alkalies, Dilute	Fair to Good
■ Alkalies, Concentrated	Fair to Good
■ Amines	Poor to Good
■ Animal & Vegetable Oils	Poor to Good
■ Brake Fluids, Non-Petroleum Based	Poor to Good
■ Diester Oils	Poor
■ Esters, Alkyl Phosphate	Poor
■ Esters, Aryl Phosphate	Poor
■ Ethers	Poor
■ Fuel, Aliphatic Hydrocarbon	Poor
■ Fuel, Aromatic Hydrocarbon	Poor
■ Fuel, Extended (Oxygenated)	Poor
■ Halogenated Solvents	Poor
■ Hydrocarbon, Halogenated	Poor
■ Ketones	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, R-13
■ Refrigerant Halofluorocarbons w/ Oil	Poor
■ Silicone Oil	Poor
■ Solvent Resistance	Poor



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Thermal Properties

- | | |
|---------------------------------------|----------------------|
| ■ Low Temperature Range | - 150° F to - 100° F |
| ■ Minimum for Continuous Use (Static) | - 90° F |
| ■ Brittle Point | - 100° F |
| ■ High Temperature Range | + 180° F to + 220° |
| ■ Maximum for Continuous Use (Static) | + 200° F |

Environmental Performance

- | | |
|------------------------|-------------------|
| ■ Colorability | Good |
| ■ Flame Resistance | Poor |
| ■ Gas Permeability | Good |
| ■ Odor | Good |
| ■ Ozone Resistance | Poor |
| ■ Oxidation Resistance | Good to Excellent |
| ■ Radiation Resistance | Poor |
| ■ Steam Resistance | Fair to Good |
| ■ Sunlight Resistance | Poor |
| ■ Taste Retention | Fair to Good |
| ■ Weather Resistance | Poor to Good |
| ■ Water Resistance | Good to Excellent |

For assistance in identifying the appropriate polymer or material, or to develop and formulate a polyacrylate / acrylic 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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