

# Isoprene (Synthetic Latex)

ASTM D1418 & ISO 1629 Designation: IR  
ASTM D2000, SAE J200 Type/Class: AA  
Mil-R-3065 (Mil-Std 417) Class: RN



**Advantages:** Does not contain proteins and can be utilized in latex allergy applications.

**Limitations:** Lower green strength; slower cure rates; lower hot tear; lower ageing properties than Natural Rubber.

## Physical & Mechanical Properties

Durometer or Hardness Range: 25-90 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: Excellent  
Resilience/Rebound: Good to Excellent  
Tear Resistance: Poor to Fair  
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): Fair to 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  
Esthers: 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, R-13  
Refrigerant Halofluorocarbons w/ Oil: Poor  
Silicone Oil: Good  
Solvent Resistance: Fair