

POLYMER & MATERIAL SELECTION GUIDE



Abbreviation NR

Chemical Definition: Polyisoprene

Physical & Mechanical Properties

Durometer or Hardness Range, 30 - 95 Shore A
Tensile Strength Range, 35 - 250 kg/cm²
Elongation (Range %), 300 % - 900 %
Abrasion Resistance, Good to Excellent
Adhesion to Metal, Excellent
Adhesion to Rigid Materials, Excellent
Compression Set, Excellent
Flex Cracking Resistance, Excellent
Impact Resistance, Good to Excellent
Resilience / Rebound, Excellent
Tear Resistance, Good to Excellent
Vibration Dampening, Good to Excellent

Thermal Properties

Low Temperature Range - 28.8 °C to - 5.6 °C
Minimum for Continuous Use (Static) - 51.1 °C
Brittle Point - 62.2 °C
High Temperature Range + 82.2 °C to + 104.4 °C
Maximum for Continuous Use (Static) + 82.2 °C

Environmental Performance

Colorability, Poor
Flame Resistance, Fair to Good
Gas Permeability, Fair to Good
Odor, Good to Excellent
Ozone Resistance, Poor
Oxidation Resistance, Good

Chemical Resistance

Acids Dilute, Fair to Excellent
Acids Concentrated, Poor to Good
Acids Organic (Dilute), Fair to Good
Acids Organic (Concentrated), Good
Acids Inorganic, Good
Alcohol's, 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
Ethers, Poor
Fuel, Aliphatic Hydrocarbon, Poor
Fuel, Aromatic Hydrocarbon, Poor
Fuel, Extended (Oxygenated), Poor
Halogenated Solvents, Poor
Hydrocarbon, Halogenated, Poor
Ketones, 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, Poor

Abbreviation IR

Chemical Definition Synthetic Polyisoprene

Physical & Mechanical Properties

Durometer or Hardness Range 30 - 95 Shore A
Tensile Strength Range 35 - 210 kg/cm²
Elongation (Range %) 300 % - 900 %
Abrasion Resistance, Good to Excellent
Adhesion to Metal, Excellent
Adhesion to Rigid Materials, Excellent
Compression Set, Excellent
Flex Cracking Resistance, Excellent
Impact Resistance, Good to Excellent
Resilience / Rebound, Excellent
Tear Resistance, Good to Excellent
Vibration Dampening, Good to Excellent

Thermal Properties

Low Temperature Range - 28,8 °C to - 56,6 °C
Minimum for Continuous Use (Static) - 51,1 °C
Brittle Point - 62,2 °C
High Temperature Range + 82,2 °C to + 104,4 °C
Maximum for Continuous Use (Static) + 82,2 °C

Environmental Performance

Colorability, Poor
Flame Resistance, Fair to Good
Gas Permeability, Fair to Good
Odor, Good to Excellent
Ozone Resistance, Poor
Oxidation Resistance, Good

Chemical Resistance

Acids, Dilute, Fair to Excellent
Acids, Concentrated, Poor to Good
Acids, Organic (Dilute), Fair to Good
Acids, Organic (Concentrated), Good
Acids, Inorganic, Good
Alcohol's, 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
Ethers, Poor
Fuel, Aliphatic Hydrocarbon, Poor
Fuel, Aromatic Hydrocarbon, Poor
Fuel, Extended (Oxygenated), Poor
Halogenated Solvents, Poor
Hydrocarbon, Halogenated, Poor
Ketones, 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, Poor

Abbreviation BR

Chemical Definition Polybutadiene

Physical & Mechanical Properties

Durometer or Hardness Range 45 - 80 Shore A
Tensile Strength Range 35 - 140 kg/cm²
Elongation (Range %), 450 % - 650 %
Abrasion Resistance, Fair to Excellent
Adhesion to Metal, Good
Adhesion to Rigid Materials, Fair to Good
Compression Set, Good to Excellent
Flex Cracking Resistance, Fair to Excellent
Impact Resistance, Poor to Good
Resilience / Rebound, Fair to Excellent
Tear Resistance, Poor to Good
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range -101.1 °C to - 73.3 °C
Minimum for Continuous Use (Static) - 67.7 °C
Brittle Point - 73.3 °C
High Temperature Range + 82.2 °C to + 104.4 °C
Maximum for Continuous Use (Static) + 93.3 °C

Environmental Performance

Colorability, Good
Flame Resistance, Poor
Gas Permeability, Good
Odor, Good
Ozone Resistance, Poor
Oxidation Resistance, Good to Excellent

Chemical Resistance

Acids Dilute, Fair to Good
Acids Concentrated, Fair to Good
Acids Organic (Dilute), Good
Acids Organic (Concentrated), Poor
Acids Inorganic, Good
Alcohols, 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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Passion For Quality

Abbreviation SBR

Chemical Definition Styrene Butadiene

Physical & Mechanical Properties

Durometer or Hardness Range 30 - 95 Shore A
Tensile Strength Range 35 - 210 kg/cm²
Elongation (Range %), 450 % - 600 %
Abrasion Resistance, Excellent
Adhesion to Metal, Excellent
Adhesion to Rigid Materials, Excellent
Compression Set, Good to Excellent
Flex Cracking Resistance, Good
Impact Resistance, Excellent
Resilience / Rebound, Good
Tear Resistance, Fair to Excellent
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range - 5.1 °C to - 34.4 °C
Minimum for Continuous Use (Static) - 51.1 °C
Brittle Point - 62.2 °C
High Temperature Range + 98.8 °C to + 121.1 °C
Maximum for Continuous Use (Static) + 107.2 °C

Environmental Performance

Colorability, Good
Flame Resistance, Poor
Gas Permeability, Fair
Odor, Good
Ozone Resistance, Poor
Oxidation Resistance, Fair to Excellent

Chemical Resistance

Acids Dilute, Fair to Good
Acids Concentrated, Poor to Fair
Acids Organic (Dilute), Good
Acids Organic (Concentrated), Poor to Good
Acids Inorganic, Fair to Good
Alcohols, Good
Aldehydes, Poor to Fair
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, Poor 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, Poor
Solvent Resistance, Poor



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Passion For Quality

Abbreviation CR

Chemical Definition Polychloroprene

Physical & Mechanical Properties

Durometer or Hardness Range 20 - 95 Shore A
Tensile Strength Range 35 - 210 kg/cm²
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

Low Temperature Range - 56,6 °C to - 34,4 °C
Minimum for Continuous Use (Static) - 62,2 °C
Brittle Point - 65 °C
High Temperature Range + 93,3 °C to + 121,1 °C
Maximum for Continuous Use (Static) + 121,1 °C

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

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
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
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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Passion For Quality

Abbreviation EPDM

Chemical Definition Ethylene Propylene Diene Monomer

Physical & Mechanical Properties

Durometer or Hardness Range 30 - 90 Shore A
Tensile Strength Range 35 - 200 kg/cm²
Elongation (Range %) 100 % - 700 %
Abrasion Resistance, Good
Adhesion to Metal, Good to Excellent
Adhesion to Rigid Materials, Good to Excellent
Compression Set, Poor to Excellent
Flex Cracking Resistance, Good
Impact Resistance, Very Good
Resilience / Rebound, Fair to Good
Tear Resistance, Fair to Good
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range - 51,1 °C to - 40 °C
Minimum for Continuous Use (Static) - 51,1 °C
Brittle Point - 56,6 °C
High Temperature Range + 104,4 °C to + 148,8 °C
Maximum for Continuous Use (Static) + 148,8 °C

Environmental Performance

Colorability, Good to Excellent
Flame Resistance, Poor
Gas Permeability, Fair to Good
Odor, Good
Ozone Resistance, Good to Excellent
Oxidation Resistance, Excellent

Chemical Resistance

Acids, Dilute, Excellent
Acids, Concentrated, Excellent
Acids, Organic (Dilute), Excellent
Acids, Organic (Concentrated), Fair to Good
Acids, Inorganic, Excellent
Alcohols, Good to Excellent
Aldehydes, Good to Excellent
Alkalies, Dilute, Excellent
Alkalies, Concentrated, Excellent
Amines, Fair to Good
Animal & Vegetable Oils, Good
Brake Fluids, Non-Petroleum Based, Good to Excellent
Diester Oils, Poor
Esters, Alkyl Phosphate, Excellent
Esters, Aryl Phosphate, Excellent
Ethers, Fair
Fuel, Aliphatic Hydrocarbon, Poor
Fuel, Aromatic Hydrocarbon, Poor
Fuel, Extended (Oxygenated), Poor
Halogenated Solvents, Poor
Hydrocarbon, Halogenated, Poor
Ketones, Good to Excellent
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, Excellent
Solvent Resistance, Poor



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Passion For Quality

Abbreviation NBR

Chemical Definition Acrylonitrile Butadiene

Physical & Mechanical Properties

Durometer or Hardness Range 20 - 95 Shore A
Tensile Strength Range 35 - 245 kg/cm²
Elongation (Range %) 350 % - 650 %
Abrasion Resistance, Good to Excellent
Adhesion to Metal, Excellent
Adhesion to Rigid Materials, Good to Excellent
Compression Set, Good to Excellent
Flex Cracking Resistance, Fair to Good
Impact Resistance, Fair to Good
Resilience / Rebound, Good
Tear Resistance, Good to Excellent
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range - 56,6 °C to -17,7 °C
Minimum for Continuous Use (Static) - 40 °C
Brittle Point -56,6 °C to -17,7 °C
High Temperature Range + 98,8° C to + 121,1° C
Maximum for Continuous Use (Static) + 121,1 °C

Environmental Performance

Colorability, Excellent
Flame Resistance, Poor
Gas Permeability, Fair to Excellent
Odor, Good
Ozone Resistance, Fair to Good
Oxidation Resistance, Good

Chemical Resistance

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



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Passion For Quality

Abbreviation XNBR

Chemical Definition Carboxylated Nitrile

Physical & Mechanical Properties

Durometer or Hardness Range 50 - 90 Shore A
Tensile Strength Range 70 - 245 kg/cm²
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

Thermal Properties

Low Temperature Range - -45,5 °C to - 28,8 °C
Minimum for Continuous Use (Static) - 40 °C
Brittle Point - 45,5 °C to -28,8 °C
High Temperature Range + 98,8 °C to + 121,1 °C
Maximum for Continuous Use (Static) + 121,1 °C

Environmental Performance

Colorability, Good
Flame Resistance, Poor
Gas Permeability, Fair to Excellent
Odor, Good
Ozone Resistance, Fair
Oxidation Resistance, Good

Chemical Resistance

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



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Passion For Quality

Abbreviation CSM

Chemical Definition

Chlorosulfonated-polyethylene

Physical & Mechanical Properties

Durometer or Hardness Range 45 - 95 Shore A

Tensile Strength Range 70 - 210 kg/cm²

Elongation (Range %) 100 % - 800 %

Abrasion Resistance, Good to Excellent

Adhesion to Metal, Excellent

Adhesion to Rigid Materials, Excellent

Compression Set, Poor to Good

Flex Cracking Resistance, Fair to Good

Impact Resistance, Good to Very Good

Resilience / Rebound, Fair to Good

Tear Resistance, Fair to Good

Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range - 51,1 °C to - 40 °C

Minimum for Continuous Use (Static) - 53,8 °C

Brittle Point - 56,6 °C

High Temperature Range + 107,2 °C to + 135 °C

Maximum for Continuous Use (Static) + 135 °C

Environmental Performance

Colorability, Excellent

Flame Resistance, Good to Excellent

Gas Permeability, Good to Excellent

Odor, Good

Ozone Resistance, Excellent

Oxidation Resistance, Excellent

Chemical Resistance

Acids, Dilute, Excellent

Acids, Concentrated, Good to Excellent

Acids, Organic (Dilute), Excellent

Acids, Organic (Concentrated), Good

Acids, Inorganic, Good to Excellent

Alcohols, Excellent

Aldehydes, Poor to Fair

Alkalies, Dilute, Good to Excellent

Alkalies, Concentrated, Good to Excellent

Amines, Poor

Animal & Vegetable Oils, Good

Brake Fluids, Non-Petroleum Based, Fair

Diester Oils, Poor

Esters, Alkyl Phosphate, Poor

Esters, Aryl Phosphate, Fair

Ethers, Poor

Fuel, Aliphatic Hydrocarbon, Fair to Good

Fuel, Aromatic Hydrocarbon, Fair

Fuel, Extended (Oxygenated), Fair

Halogenated Solvents, Poor

Hydrocarbon, Halogenated, Poor

Ketones, Poor

Lacquer Solvents, Poor

LP Gases & Fuel Oils, Good

Mineral Oils Good to, Very Good

Oil Resistance, Fair to Good

Petroleum Aromatic, Poor

Petroleum Non-Aromatic, Fair

Refrigerant Ammonia, Good

Refrigerant Halofluorocarbons R-11, R-12, R-13

Refrigerant Halofluorocarbons w/ Oil R-11, R-12, R-22

Silicone Oil, Excellent

Solvent Resistance, Fair to Good



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Passion For Quality

Abbreviation FKM

Chemical Definition
Vinylidene fluoride hexafluoropropylene

Physical & Mechanical Properties

Durometer or Hardness Range 50 - 95 Shore A
Tensile Strength Range 35 - 140 kg/cm²
Elongation (Range %) 400 % - 500 %
Abrasion Resistance, Fair to Good
Adhesion to Metal, Good to Excellent
Adhesion to Rigid Materials, Fair to Good
Compression Set, Good to Excellent
Flex Cracking Resistance, Fair to Good
Impact Resistance, Good
Resilience / Rebound, Poor to Fair
Tear Resistance, Fair to Good
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range -34,4 °C to -17,7 °C
Minimum for Continuous Use (Static) + 12,2 °C to - 34,4 °C
Brittle Point -17,7 °C to - 40 °C
High Temperature Range + 232,2 °C to + 260 °C
Maximum for Continuous Use (Static) + 260 °C

Environmental Performance

Colorability, Good to Excellent
Flame Resistance, Good to Excellent
Gas Permeability, Good to Excellent
Odor, Good
Ozone Resistance, Excellent
Oxidation Resistance, Excellent

Chemical Resistance

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



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Passion For Quality

Abbreviation HNBR

Chemical Definition Hydrogenated
Acrylonitrile Butadiene

Physical & Mechanical Properties

Durometer or Hardness Range 30 - 95 Shore A
Tensile Strength Range 105 - 245 kg/cm²
Elongation (Range %) 90 % - 550 %
Abrasion Resistance, Good to Excellent
Adhesion to Metal, Excellent
Adhesion to Rigid Materials, Good to Excellent
Compression Set, Good to Excellent
Flex Cracking Resistance, Fair to Good
Impact Resistance, Excellent
Resilience / Rebound, Good
Tear Resistance, Good to Excellent
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range - 56,6 °C to -34,4 °C
Minimum for Continuous Use (Static) - 40 °C
Brittle Point -56,6 °C to -34,4° C
High Temperature Range + 121,1 °C to + 162,7 °C
Maximum for Continuous Use (Static) + 162,7 °C

Environmental Performance

Colorability, Excellent
Flame Resistance, Poor
Gas Permeability, Fair to Excellent
Odor, Good
Ozone Resistance, Good to Excellent
Oxidation Resistance, Excellent

Chemical Resistance

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

Abbreviation AU or EU

Chemical Definition Polyester / Polyether Urethane

Physical & Mechanical Properties

Durometer or Hardness Range 35 - 95 Shore A
Tensile Strength Range 35 - 420 kg/cm²
Elongation (Range %) 250 % - 900 %
Abrasion Resistance, Excellent
Adhesion to Metal, Excellent
Adhesion to Rigid Materials, Good
Compression Set, Poor to Good
Flex Cracking Resistance, Fair to Good
Impact Resistance, Good to Excellent
Resilience / Rebound, Poor to Good
Tear Resistance, Good to Excellent
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range - 53,8 °C to - 40 °C
Minimum for Continuous Use (Static) - 53,8 °C
Brittle Point - 51,1 °C to - 62,2 °C
High Temperature Range + 82,2 °C to + 104,4 °C
Maximum for Continuous Use (Static) + 93,3 °C

Environmental Performance

Colorability, Good to Excellent
Flame Resistance, Poor to Good
Gas Permeability, Good to Excellent
Odor, Excellent
Ozone Resistance, Excellent
Oxidation Resistance, Good to Excellent

Chemical Resistance

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



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Passion For Quality

Abbreviation VMQ, PMQ, PVMQ

Chemical Definition Polydimethylsiloxane

Physical & Mechanical Properties

Durometer or Hardness Range 20 - 90 Shore A
Tensile Strength Range 14 - 105 kg/cm²
Elongation (Range %) 100 % - 900 %
Abrasion Resistance, Poor to Good
Adhesion to Metal, Good
Adhesion to Rigid Materials, Good
Compression Set, Good to Excellent
Flex Cracking Resistance, Poor to Good
Impact Resistance, Poor to Good
Resilience / Rebound, Good to Excellent
Tear Resistance, Poor to Good
Vibration Dampening, Fair to Good

Thermal Properties

Low Temperature Range - 116,6 °C to - 67,7 °C
Minimum for Continuous Use (Static) - 112,2 °C
Brittle Point - 116,6 °C to - 51,1 °C
High Temperature Range + 204,4 °C to + 287,7 °C
Maximum for Continuous Use (Static) + 287,7 °C

Environmental Performance

Colorability, Excellent
Flame Resistance, Fair to Excellent
Gas Permeability, Poor to Fair
Odor, Good
Ozone Resistance, Excellent
Oxidation Resistance, Excellent

Chemical Resistance

Acids, Dilute, Fair to Good
Acids, Concentrated, Poor to Fair
Acids, Organic (Dilute), Good
Acids, Organic (Concentrated), Fair
Acids, Inorganic, Fair to Good
Alcohol's, Fair to Good
Aldehydes, Good
Alkalies, Dilute, Poor to Good
Alkalies, Concentrated, Poor to Excellent
Amines, Good
Animal & Vegetable Oils, Good to Excellent
Brake Fluids, Non-Petroleum Based, Good
Diester Oils, Poor to Fair
Esters, Alkyl Phosphate, Good
Esters, Aryl Phosphate, Good
Ethers, Poor
Fuel, Aliphatic Hydrocarbon, Poor to Fair
Fuel, Aromatic Hydrocarbon, Poor
Fuel, Extended (Oxygenated), Poor
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Hydrocarbon, Halogenated, Poor
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