

Properties of Elastomers

General Properties	Natural Rubber	Styrene Butadiene	Butyl	Ethylene Propylene	Neoprene	Nitrile	Silicone	Hypalon	Urethane Rubber	Epichlorohydrin	HNBR	Fluorocarbon	Fluorosilicone
Tensile Strength - Range:													
Hardness Range (Shore A)	20-90	40-90	40-75	30-90	10-95	20-95	10-85	40-95	10A to 80D	40-95	70-90	50-95	40-80
Specific Gravity (Base Material)	0.93	0.94	0.92	0.86	1.23	1.0	1.1-1.6	1.12-1.28	1.06	1.36/1.27	0.98	1.85	1.3-1.8
Tear Resistance	Good	Fair	Good	Good	Good	Fair	Poor	Fair	Excellent	Fair	Good	Fair	Fair
Abrasive Resistance	Excellent	Good	Good	Good	Excellent	Good	Poor	Excellent	Outstanding	Good	Good	Good	Good
Compression Set	Good	Excellent	Fair	Good	Fair to Good	Good	Fair	Fair	Good	Fair	Good	Very Good	Fair
Rebound:													
Cold	Excellent	Good	Bad	Excellent	Very Good	Good	Excellent	Good	Poor @ 70°F	Poor/Fair	Good	Good	Excellent
Hot	Excellent	Good	Very Good	Excellent	Very Good	Good	Excellent	Good	Good @ R.T.	Poor/Fair	Very Good	Excellent	Good
Dielectric Strength	Excellent	Good	Excellent	Excellent	Very Good	Poor	Good	Excellent	Excellent	Good	Fair	Good	Good
Electrical Insulation	Good to Excellent	Good	Good to Excellent	Good	Fair to Good	Poor	Excellent	Good	Fair	Fair	Fair	Fair	Very Good
Flame	Fair	Fair	Very Low	Fair to Poor	Low	Fair	Fair	Low	Fair	Very Low	Low	Very Low	Low
Solvent Resistance:													
Aliphatic Hydrocarbons	Poor	Poor	Poor	Poor	Good	Excellent	Poor	Good	Excellent	Good	Good	Excellent	Fair
Aromatic Hydrocarbons	Poor	Poor	Poor	Poor	Fair	Good	Poor	Fair	Fair to Good	Good	Good	Excellent	Fair
Oxygenated (ketones, etc.)	Good	Poor	Good	Good	Poor	Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor
Lacquer Solvents	Poor	Poor	Poor	Good	Poor	Fair	Poor	Poor	Poor	Fair	Poor	Poor	Poor
Swelling in Lubricating Oil	Poor	Poor	Poor	Poor	Good	Very Good	Fair	Good to Excellent	Excellent	Very Good	Very Good	Excellent	Good
Resistance To:													
Oil and Gasoline	Poor	Poor	Poor	Poor	Good	Excellent	Fair	Good	Excellent	Excellent	Very Good	Excellent	Good
Animal & Vegetable Oils	Poor to Good	Poor to Good	Excellent	Good	Good	Excellent	Fair	Good	Excellent	Excellent	Very Good	Excellent	Good
Water Absorption	Very Good	Very Good	Very Good	Excellent	Good	Fair to Good	Good	Very Good	Good @ 70°F Poor @ 212°F	Good	Very Good	Very Good	Very Good
Oxidation	Good	Good	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Good	Good	Excellent	Excellent
Ozone	Fair	Fair	Good	Excellent	Excellent	Fair	Excellent	Outstanding	Outstanding	Very Good	Very Good	Excellent	Excellent
Sunlight Aging	Poor	Fair	Very Good	Very Good	Very Good	Poor	Excellent	Outstanding	Good	Good	Very Good	Very Good	Very Good
Heat Aging	Fair	Fair	Good	Excellent	Good	Very Good	Outstanding	Excellent	Fair	Very Good	Excellent	Excellent	Excellent
Flame	Poor	Poor	Poor	Poor	Good	Poor	Fair	Good	Fair	Fair/Poor	Fair	Good	Fair
Heat	Good	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Very Good	Excellent	Outstanding	Good
Cold	Excellent	Good	Good	Excellent	Good	Good	Excellent	Good	Excellent	Fair/Good	Excellent	Good	Excellent
Temperature Range (°C)	-55 - +90	-50 - +100	-40 - +120	-50 - +150	-40 - +100	-40 - +100	-60 - +200	-20 - +120	-25 - +100	-40 - +120	-25 - +150	-20 - +200	-60 - +175
Major Attributes:	Resilience	General Purpose	Air Retention	General Purpose	Oil & Gas Resistance Weatherability	Oil Resistance	Heat Resistance	Color Retention Weatherability Ozone Resistance	Abrasion Resistance Load Bearing Characteristics	Heat, Oil, Ozone Resistance	Chemical, Oil, Fuel Resistance	Heat Resistant, Excellent Solvent & Chemical Resistance	Low Temperature Flexibility, Fluid Resistance, Ozone Resistance
ASTM D-2000 Classification	AA	AA	AA	DA	BC	BG	GE/FE	CE	BG	DK	BF	HK	FK