




# Properties Comparison of Various Elastomers

A = Excellent B = Good C = Fair D = Poor F = 

	Natural Rubber	Styrene Butadiene Copolymer	Butyl Rubber	Ethylene Propylene Rubber	Poly Chloroprene (Neoprene)	Nitrile Rubber	Urethane Rubber	Chlorosulfonated Polyethylene (Hypalon)	Polyacrylate (PA)	Epichlorhydrin	Silicone Rubber	Fluorocarbon (VITON)
ASTM D1418 Designation	NR	SBR	IIR	EPDM	CR	NBR	AU, EU	CSM	ACM	ECO	VMQ	FKM
ASTM D2000 SAE J200 Type Class	AA	AA BA	AA BA	AA BA,CA	BC BE	BF,BG BK,CH	BG	CE	DF DH	CH	FC,FE, GE	HK
Specific Gravity	0.92	0.94	0.92	8.86	1.23	1	1.02-1.25	1-1.2	1.09	1.27-1.36	0.98	1.85
Tensile Strength	A	B	C	C	B	B	A	B	F	C	F	B
Elongation	A	B	B	B	B	B	A	B	F	F	A	F
Hardness, Low	30	40	30	30	30	30	20	40	40	40	30	60
Hardness, High	90	90	70	90	90	90	100+	80	80	70	85	90
Resilience	A	C	F	B	A	B	A	C	C	C	C	C
Tearing	A	C	C	C	B	B	A	C	F	C	F	C
Abrasion	A	A	A	B	B	A	A	B	C	C	F	C
Impact	A	A	B	B	A	B	A	B	F	B	F	C
Gas Permeability	C	C	A	C	B	B	B	B	C	A	F	B
Oxidation	C	C	A	B	B	C	B	A	B	B	A	A
Ozone	F	F	B	A	B	F	B	A	B	A	A	A
Weather	C	C	A	A	B	C	B	B	B	B	A	A
Sunlight	F	C	A	A	B	D	B	A	B	B	A	A
Heat	F	C	B	A	B	C	C	B	B	B	A	A
Flame	F	F	F	F	B	F	C	B	D	B	B	B
Flex Crack	C	C	B	A	B	C	B	B	C	B	B	B
Low Temp	B	C	C	B	C	C	B	C	F	B	A	B
Petroleum Oil, Fuel, Gasoline	F	F	F	F	D	B	B	D	B	B	C	A
Animal, Vegetable Oil	C	C	B	B	B	A	B	B	A	A	D	A
Alcohols	B	B	B	D	A	B	D	A	B	B	B	A
Alkalis	C	C	A	B	A	B	F	A	F	D	F	D
Acids	D	D	B	B	B	B	F	B	C	C	C	B
Allphatic Hydrocarbons	F	F	F	F	B	A	B	B	A	B	F	A
Aromatic Hydrocarbons	F	F	F	F	C	D	F	C	C	B	F	A
Water	A	B	A	A	B	B	C	B	F	B	B	B