

Properties of Elastomers

COMMON NAME	Acrylic	Viton [™]	Fluoro-Silicone	Silicone	Urethane	Epichlorohydrin
CHEMICAL NAME	Polyacrylate	Fluorinated Hydrocarbon	Fluorovinyl Silane	Polysiloxane	Polyester/Polyether Urethane	Polyalkylene Oxide Polymer
PROPERTIES AND CHARACTERISTICS						
ASTM D-2000-SAE J200- Designation	DF,DH	HK	FK	FC,FE,GE	BG	DK,DJ
ASTM Designation (D1418)	ACM,ANM	FKM	FMQ	PMQ,MQ,VMQ	AU,EU	CO,ECO,PO
Specific Gravity	1.09	1.86	1.4	1.1 - 1.6	1.25	1.36/1.27
Durometer Range Available	40-90	60-90	40-80	20-90	5-100	40-90
Tensile Strength, PSI	2500	3000	1500	1500	5000	2500
Elongation	450	300	400	900	750	350
Compression Set	B	B	D	B	D	C
Resilience	Med	Low	Low	High-Low	High-Low	High-Low
Electrical Resistance (Polymer)	C	B	A	A	B	B
Impact Strength	D	B	D	D	A	C
Abrasion Resistance	C	B	D	C	A	C
Tear Resistance	D	B	D	C	A	C
Heat Aging at 212 ° F	A	A	A	A	B	B
Flame Resistance	D	A	A	A	D	C
High Temperature Service Limits +	300	485	400	400	160	260
Low Temperature - Stiffening ° F	+35 to +10	+10 to -10	-70	-60 to -180	-10 to -30	-15 to -40
Weather-Sunlight Aging	A	A	A	A	A	B
Ozone Cracking	B	A	A	A	A	A
Water	D	A	A	A	C	B
Steam	NR	B	C	C	D	C

A: Very Good B: Good C: Fair D: Poor NR: Not Recommended

The above information is to be used as a guide and is not intended as a recommendation.

Shayan Polymer Co. cannot guarantee the accuracy or be held responsible for the information's end use.

It is recommended that each elastomer be tested for its specific application.

This is a multi-page file.

Please go to Page 2 to view the properties of additional elastomers.



Properties of Elastomers

COMMON NAME	Natural Rubber	Synthetic Rubber	Butadiene	SBR	Butyl	EP Rubber	Neoprene	Nitrile
CHEMICAL NAME	Polyisoprene	Synthetic Polyisoprene	Polybutadiene	Styrene Butadiene	Isobutylene Isoprene	Ethylene Propylene	Chloroprene	Butadiene Acrylonitrile
PROPERTIES AND CHARACTERISTICS								
ASTM D-2000-SAE J200 Designation	AA	AA	AA	AA,BA	AA,BA,CA	BA,DA	BC,BE	BF,BG,BK
ASTM Designation (D1418)	NR	IR	BR	SBR	IIR	EPDM,EPM	CR	NBR
Specific Gravity	0.92	0.91	0.91	0.94	0.92	0.86	1.25	1
Durometer Range Available	30-90	40-80	40-90	40-80	20-90	40-90	10-90	40-95
Tensile Strength, PSI	4500	4500	3000	3500	3000	2500	4000	4000
Elongation	650	650	650	600	850	600	600	650
Compression Set	A	A	B	B	B	B	B	B
Resilience	High	High	High	Med	Low	Med	High	Med-Low
Electrical Resistivity (Polymer)	A	A	A	A	A	A	C	D
Impact Strength	A	A	B	A	B	B	B	C
Abrasion Resistance	A	B	A	A	C	B	A	A
Tear Resistance	A	A	B	C	B	C	B	B
Heat Aging at 212 ° F	C	C	C	B	A	B	B	B
Flame Resistance	D	D	D	D	D	D	B	D
High Temperature Service Limits +	160	160	160	220	220	260	220	220
Low Temperature - Stiffening ° F	-20 to -50	-20 to -50	-30 to -60	0 to - 50	-20 to -50	-10 to -40	+10 to -50	+30 to -20
Weather-Sunlight Aging	D	NR	D	D	A	A	B	D
Ozone Cracking	NR	NR	NR	NR	A	A	A	C
Water	A	A	A	B	A	A	B	A
Steam	B	B	B	C	A	B	B	C

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