

General Properties Of O-Ring Elastomers

Elastomer	ASTM D1418 Designation	ASTM D2000/SAE 2000 Type, Class	Temp. Limits °F		Tensile Strength	Elongation Maximum (%)	Hardness Shore A	Resilience-Rebound	Compression Set	Adhesion To Metals	Abrasion Resistance	Tear Resistance	Weather Resistance	Ozone Resistance	Water Swell Resistance	Steam Resistance	Gas Impermeability	Acid Resistance	Alkali Resistance	Alcohols	Lubricating Oils	Hydraulic Based	Aromatic Hydrocarbons	Halogenated Hydrocarbons	Phosphate Ester (Skydrol®)	Polar Solvents (Ketones)
			Low	High																						

Aflas™	AF	FKM	HK	F	400	60-90	F-G		G	F	E	E	G	G-E	G	G	G	G	G	G	F	F-G	F-P	G	F
Butyl	BU	IIR	AA; BA	F	800	40-80	P	F-G	G	F-G	G	G-E	G-E	E	G	E	G-E	G-E	E	P	P	P	G	G	
Chemraz®	CZ	FFKM	▲	P	120 to 190	65-90	G			P	F-P	E	E	G	G	E	G-E	E	G	E	E	E	E	E	
Epichlorohydrin	EH	CO; ECO	CH	F	400	50-90	GG	G	F-G	G	E	G-E	F-G	F-G	F	G-E	E	G-E	E	G-E	E	E	E	E	E
Ethylene-Propylene	EP	EPM; EPDM	AA; BA; CA; DA	E	600	30-95	G	F-G	F-G	G	F-G	E	E	E	F	G	E	E	P	P	E	E	E	E	
Fluorocarbon	VT	FKM	HK	F	300	45-90	F-G	G	F-G	G	F-G	E	E	G	P	G-E	E	F-G	E	E	E	E	E	E	P
Fluorosilicone	FS	FVMQ	FK	P	600	40-80	G	G-E	F-P	P	P-F	E	E	E	P	G	F-E	G	E	F-G	F-G	F-P	F-P	P	
Hypalon®	HY	CSM	CE	F	500	50-90	F-G	F	G-E	G-E	F	E	F-G	P	G	G-E	G-E	E	F-E	F	F-P	F-P	P	P	
Kalrez®	KA	FFKM	▲	P	120 to 190	65-90	F			F-G	F-G			E	E	E	E	E	E	E	E	E	F-G	E	
Natural Rubber	NA	NR	AA	G	700	40-90	E	G-E	E	E	E	P	E	P	F-P	F-G	G-E	G	P	P	P	P	P	F-G	
Neoprene®	CR	CR	BC; BE	G	600	40-90	G-E	F-G	G-E	G	G-E	F-G	P	G-E	F-G	G-E	G-E	G	F	P	P	P	P	P	
Nitrile	BN	NBR; XNBR	BF; BG; BK; CH	E	600	40-90	G	G	G-E	G-E	P-F	P	G	P	G-E	G	G-E	E	G-E	E	G-E	P	F-P	P	
Nitrile, Hydrogenated	ZT	HNBR	DH	P	340	50-90	G-E	G-E		G-E	G	G	G	G	G	G-E	E	E	E	E	G-E	F-P	P	P	
Polyacrylate	PY	ACM	DF; DH	F	600	40-90	F	F	G	F-G	F-G	E	E	P	P	F-G	P	P	E	F-G	P	F-P	P	P	
Polysulfide	TH	T	AK; BK	P	400	50-80	F	P	P	P	P	G-E	E	P	P	G-E	F-P	P	G-E	F	G-E	F-G	F-P	P	
Polyurethane, Cast	CP	▲	▲	P	650	70&80	F-G	G-E	E	E	E		G	F-G	P	P-G	F	E	E	E	G-E	F-G		P	
Polyurethane, Milled	MP	AU; EU	BG	F	500	40-90	G-E	P-G	E	E	G	G	P	P	G-E	P	F	P	G	F	F	F-P	P	P	
Silicone	SL	MQ; PMQ; VMQ; PVMQ	FC; FE; GE	F	800	20-80	F-G	G-E	G	P	E	E	E	F-P	P	P-G	E	G-E	P	P	P	P	P	P	
Styrene Butadiene	SB	SBR	AA; BA	E	600	40-90	G	G	E	E	F-G	P	E	P	F-G	F-G	G-E	P	P	P	P	P	P	P	
Teflon®, Virgin	TF	FEP	▲	P	300	98	P	G	P	P-G	P	E	E	E	G	E	F-E	E	E	E	E	E	E	E	
Vamac®	VA	AEM	EE; EF; EG	F	450	50-90	F	G	G	G	E	E	G	P	G-E	P-G	F	G	G	F	G	P	F-G	P	

E=Excellent G=Good F=Fair P=Poor ▲=No designation at time of publication Blank=Information not available or conflicting