

O-Ring Material Comparison



		Nitrile (Buna-N) Hydrogenated Nitrile Ethylene Propylene Fluorocarbon (Viton) Neoprene (Chloroprene) Butyl (Isobutylene) Silicone Fluorosilicone Polyacrylate Styrene-Butadiene Natural Rubber										
ASTM Material Designator		NBR	HNBR	EPDM	FKM	CR	IIR	VMQ	FVMQ	ACM	SBR	NR
Resistance	\$ Material Relative Cost	\$	\$\$\$\$	\$\$	\$\$\$	\$\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$	\$	\$
	Compression Set	E	E	E	E	G	G	G	G	P	G	E
	Resilience (Rebound)	G	G	G	G	G	F	G	G	F	G	E
	Tear Strength	G	E	G	G	G	G	F	F	F	F	E
	Heat Aging	F	G	G	E	F	G	E	E	E	F	F
	Ozone	P	G	G	E	G	G	E	E	G	P	P
	Oil & Grease	G	G	P	E	G	P	F	E	E	P	P
	Fuel	P	F	P	G	P	P	P	G	E	P	P
	Water Swell	G	G	E	G	F	G	E	E	P	E	E
	Gas Impermeability	G	G	F	G	G	E	P	P	F	F	F
	Abrasion	G	G	G	F	G	G	P	P	G	E	E
Temp	Standard High Temp	212 °F	300 °F	300 °F	390 °F	250 °F	250 °F	450 °F	400 °F	300 °F	212 °F	220 °F
	Standard Low Temp	-22 °F	- 22 °F	-60 °F	5 °F	-40 °F	-75 °F	-75 °F	-75 °F	-40 °F	-50 °F	-60 °F
	Special High Temp	250 °F	-	-	-	-	-	480 °F	-	-	-	-
	Special Low Temp	-60 °F	-40 °F	-	-30 °F	-	-	-	-	-	-	-

Key: E = Excellent G = Good F = Fair P = Poor