



MATERIAL SELECTION GUIDE

PROPERTIES	NATURAL RUBBER	SBR	EPDM	NEOPRENE	NITRILE	SILICONE	VITON®	FLUOROSILICONE	CHLOROBUTYL
Hardness Range (Shore A)	30-95	40-95	30-85	30-90	40-100	40-80	50-95	40-80	30-100
Heat Resistance (Deg. C)									
Max. Continuous	75 Deg. C	85 Deg. C	130 Deg. C	95 Deg. C	100 Deg. C	205 Deg. C	205 Deg. C	170 C	100°C
Max. Intermittent	105 Deg. C	115 Deg. C	150 Deg. C	125 Deg. C	130 Deg. C	300 Deg. C	300 Deg. C	220 C	120°C
Low Temp. Resistance	-60 Deg. C	-55 Deg. C	-50 Deg. C	-35 Deg. C	-20 Deg. C	-60 Deg. C	-20 Deg. C	-60 C	-45°C
Resistance									
Oxidation	Fair	Fair	Excellent	Very Good	Good	Excellent	Outstanding	Excellent	Excellent
Ozone & Weathering	Poor	Poor	Outstanding	Very Good	Fair	Outstanding	Outstanding	Outstanding	Excellent
Oil Resistance									
*ASTM Oil No. 1 @ 20 Deg.C	Poor	Poor	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Poor
@ 100 Deg.C	Unsat.	Unsat.	Unsat.	Good	Good	Good	150 Deg. C Excellent	150 Deg. C Excellent	Poor
*ASTM Oil No. 3 @ 20 Deg.C	Unsat.	Unsat.	Unsat.	Good	Excellent	Good	Excellent	Excellent	Poor
@ 100 Deg.C	Unsat.	Unsat.	Unsat.	Fair	Good	Fair	150 Deg. C Excellent	150 Deg. C Excellent	Poor
Fuel Resistance									
ASTM Fuel 'B' @ 40 Deg. C	Unsat.	Unsat.	Unsat.	Poor	Fair	Unsuitable	Excellent	Fair	Poor
Solvent Resistance (20 Deg. C)									
Alcohol	Good	Good	Good	Good	Good	Good	Good	Good	Good to Excellent
Acetone	Fair	Fair	Good	Fair	Unsat.	Fair	Unsuitable	Unsuitable	Good to Excellent
Benzene	Unsat.	Unsat.	Unsat.	Unsat.	Unsat.	Unsat.	Good	Good	Poor
Chemical Resistance									
Acids	Fair	Fair	Good	Good	Good	Fair	Excellent	Good	Good to Excellent
Bases	Good	Good	Good	Fair	Fair	Fair	Good	Fair	Good to Excellent
Physical Strength	Excellent	Good	Good	Good	Good	Poor	Good	Poor	Good
Compression Set	Good	Good	Good	Fair to Good	Good	Good	Good	Good	Fair
Tear/Abrasion Resistance	Excellent	Good	Good	Good	Good	Poor	Good	Poor	Good
Resilience	Excellent	Good	Very Good	Very Good	Good	Good	Fair	Fair	Fair
Permeability to Gases	Poor	Fairly Low	Fairly Low	Low	Low	Fairly Low	Very Low	Fairly Low	Excellent
Electrical Strength	Excellent	Excellent	Excellent	Good	Poor	Excellent	Good	Excellent	Excellent
Flame Resistance	Poor	Poor	Poor	Self-extinguish	Poor	Good	Self-extinguish	Self-extinguish	Poor
Water Resistance	Very Good	Good	Excellent	Good	Good	Good	Good	Good	Excellent

*The aromatic content of oils has a swelling effect on rubber. ASTM Oil No. 1 (Flash pt. 243 Deg. C, Aniline pt. 124 Deg. C) has a moderate swelling effect. ASTM Oil No. 3 (flash pt. 163 Deg. C Aniline pt. 70 Deg. C) has a severe swelling effect. Both oils are petroleum based and are fully described in ASTM D471.