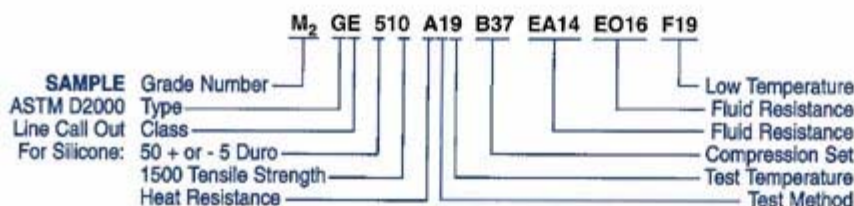


## Choosing the Right Material

The complete range of properties found in the family of synthetic elastomers are usually lacking in any one type of material. Each formulation has a primary performance advantage, and may also provide high performance in many other areas.

To assist in making an initial material choice, review the resistance properties and the physical properties below. More specific details for each material can be found in the pages following, or by contacting our factory applications staff.



For your convenience, we show a typical ASTM D2000 line call-out for Vansil® silicone materials for your review. For details of specifying your materials via the ASTM method, please contact us.

Common Name	VanSil®	Silicones VanProSil®	Silicone (general purpose)	Fluoro- silicone	Fluoro- carbon	Ethylene- propylene	Nitrile	Epichloro hydrin	Isoprene	Chloro- prene	Butyl	Natural
Designation ISO-1629: 1987E	VMQ	VMQ	MQ, VMQ	FVMQ	FPM	EPDM	NBR	ECO	IR	CR	IIR	NR
ASTM D2000 designation	GE	FC	FE	FK	HK	AA, BA, CA	BF, BG, CH	CH, DJ	AA	BC, BE	AA, BA	AA
<b>Physical Properties</b>												
Shore A range	20-80	10-75	30-80	40-80	50-90	30-90	30-90	40-90	40-90	20-90	30-80	20-90
Max. service temp., °F	500°F	550°F	450°F	450°F	400°F	300°F	250°F	300°F	200°F	220°F	250°F	200°F
Min. service temp., °F	-100°F	-100°F	-70°F	-80°F	-10°F	-40°F	-45°F	-20°F	-20°F	-10°F	-20°F	-20°F
Compression set resistance	A	A	A-B	A	A-B	A-B	B	B	B	B	C	B
Resiliency	B	A	B	B-C	C-D	B	C	C	A	A	B-C	A
Flame resistance	B	B	B-C	B	A	C	NR	D	C	B-C	C	C
Ozone resistance	A	A	A	A	A	A	NR	B	B	C-D	B-C	B
Weather resistance	A	A	A	A	A	A	C	B	D	B	A	D
Electrical insulation	A	A	A	A	C	B	C	C	C	NR	B-C	C
Abrasion resistance	C	B	C	C	B	B	A-B	A	D	B	C	D
Permeability to gases	Moderate	Moderate	Moderate	Moderate	Low	Low	Low	Very Low	Low	Low	Extr. Low	Low
Tensile Strength	Moderate	Mod-High	Low-Mod	Mod-High	High	Moderate	Mod-High	Mod-High	Mod-High	Moderate	Mod-High	Mod-High
Tear Strength	Moderate	High	Low-Mod	Mod-High	Mod-High	High	Moderate	Moderate	Moderate	Moderate	Mod-High	Mod-High
<b>Chemical Resistance</b>												
Oil resistance	C	C	C	A	A	NR	A	A	NR	B	NR	NR
Fuel resistance	C	C	C	A	A	NR	A-B	A	NR	C	NR	NR
Alcohol resistance	B	B	B	B	A	A	D	A-B	B	A	A	B-C
Alkali resistance	C	C	C	C	C	A-B	C	B	C	A	A	C
Acid resistance	C	C	C	C	A	B	D	B	NR	B	B	NR
Water resistance	A	A	A	A	A	A	A	B	B	A	A	B
Steam resistance	B	C	C	B-C	A	A	NR	D	NR	NR	B	NR
Animal / Vegetable oils	B	B	B	A	A	B	A	A	C	B	C	C
Aliphatic Hydrocarbon solvents	C	C	C	A	A	D	A	A	NR	B-C	D	NR
Aromatic Hydrocarbon solvents	C	C	C	A	A	D	D	D	NR	C-D	D	NR
Oxygenated solvents	C	C	C	C	D	A-B	D	C-D	C	C-D	B	C
Food contact suitability	A	A	A-B	NR	C-D	B	B-C	NR	NR	NR	NR	NR

A = Excellent

B = Good

C = Fair

D = Poor

NR = Not Recommended