

BOYD CORPORATION

TECHNICAL REPORT S500-70 SILICONE COMPOUND

GENERAL PROPERTIES

Silicones offer a broad temperature range, from -80° F to +400° F, and excellent dry heat resistance. Our Silicone compounds are inert and guarantee complete compliance to ASTM, Military and FDA Specifications required by food, medical, electrical and filter manufacturers. They are not used in dynamic seals because of relatively poor tensile, tear and abrasion resistance.

ASTM Designation	<u>ORIGINAL PROPERTIES</u>	ASTM D2000 <u>SPECIFICATION</u>	S500-70 <u>LABORATORY PROPERTY</u>
	Durometer, Shore A	70 +/- 5	71
	Tensile, psi (MPa), Minimum	870 (6)	995 (6.9)
	Elongation, % Minimum	150	175
	Specific Gravity		1.43
A19	<u>HEAT AGE, 70 HRS @ 225 C</u>		
	Durometer Change, Points	+10	+4
	Tensile Strength Change, %	-25	-14.3
	Elongation Change, % Maximum	-30	-18.4
B37	<u>COMPRESSION SET, 22 HRS @ 175 C</u>		
	Original Deflection, % Maximum	25	12.4
	<u>COMPRESSION SET, 70 HRS @ 150C</u>		
	Original Deflection, % Maximum		19.4
EO16	<u>ASTM #1 OIL, 70 HRS @ 150 C</u>		
	Durometer Change, Points	0/-15	-7
	Tensile Change, % Maximum	-20	-2.9
	Elongation Change, % Maximum	-20	0
	Volume Change, %	0/+10	+6.4
EO36	<u>ASTM #3 OIL, 70 HRS. @ 150 C</u>		
	Durometer Change, points	-30	-20
	Volume Change, % Maximum	+60	+35
EA14	<u>WATER RESISTANCE 70 HRS @ 100 C</u>		
	Durometer Change, Points	+/-5	-1
	Volume Change, %	+/-5	+2.5
F19	<u>LOW TEMPERATURE BRITTLINESS</u>		
	ASTM D2137, Method A		
	3 Minutes @ -55 C	Non-Brittle	Pass
	3 Minutes @ -65 C		Pass
G11	<u>Tear Resis., Die B, ppi (kN/m)</u>	51(9)	107 (18.8)

SPECIFICATIONS MET

ASTM D2000 Grade M5GE706 A19 B37 EO16 EO36 EA14 F19 G11
FDA per CFR 177.2600