



MATERIAL REPORT

REPORT NUMBER: DD4136
DATE: 08/21/91

TITLE: Evaluation of Parker Compound S0613-60 to ASTM D2000
M3GE603 B37 E016 E036 F19 G11 EA14 Z1
(Z1 5W30 oil immersion)

PURPOSE: To determine if S0613-60 meets the callout.

CONCLUSION: Compound S0613-60 meets the ASTM D2000 callout.

Recommended temperature limits: -60⁰F to 450⁰F

Recommended For

Dry heat
Some petroleum oils
Moderate water resistance
Fire resistant hydraulic fluids (HFD-R and HFD-S)
Ozone, aging, and weather resistance
Low temperature

Not Recommended For

Ketones
Acids
Silicone oils
Auto and aircraft brake fluid



REPORT DATA

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	ASTM D2000 M3GE603 B37 E016 F19 G11 EA14 Z1 <u>Pass / Fail Limits</u>	S0613-60 <u>Slab Results</u>
<u>Basic Physical Properties</u>		
Hardness	60 +/- 5	60
Tensile Strength, Mpa (psi)	3.0 (435)	7.0 (1020)
Elongation, %	100	275
Modulus @ 100%, Mpa (psi)	NR	3.1 (446)
Specific Gravity	NR	1.47
<u>ASTM D573 Heat Aging, 70 H @ 225°C</u>		
Hardness Change, pts	+/-15	+7
Tensile Change, %	+/-30	-14
Elongation Change, %	+/-30	-34
Modulus @ 100%, Mpa (psi)	NR	+4
<u>Compression Set, 22 HRS @ 175°C</u>		
% of Original Deflection, max	30	11.8
<u>E016 Fluid Immersion, ASTM #1 Oil, 70 H @ 150°C</u>		
Hardness Change, pts	0 to -15	-1
Tensile Change, % max	-20	+9
Elongation Change, % max	-20	-7
Volume Change, %	0 to +10	+2.1
Modulus @ 100%, %	NR	+9
Weight Change, %	NR	+1.2
<u>Fluid Immersion, ASTM #3 Oil, 70 HRS @ 150°C</u>		
Hardness Change, pts max	-30	-22
Volume Change, % max	+60	+26.4
Weight Change, %	NR	+16.2
<u>EA14 Fluid Immersion, Water 70 H @ 100°C</u>		
Hardness Change, pts	+/- 5	+4
Volume Change, %	+/- 5	-1.1
Weight Change, %	NR	-0.7
<u>Engine Oil Mobil 1 5W30 (Z1), 70 H @ 150°C</u>		
Hardness Change, pts	NR	-18
Tensile Change, %	NR	-43
Elongation Change, %	NR	-38
Volume Change, %	NR	+17.5
Modulus @ 100%, %	NR	-38
Weight Change, %	NR	+9.7



Compound Data Sheet
Parker O-Ring Division United States

F19 Low Temp Brittleness D2137 3 MIN @ -55 C	Pass	Pass
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