MATERIAL REPORT

ESP ENGINEERED SEAL PRODUCTS® 100% Employee-Owned
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REPORT NUMBER:
DATE: 8/29/2000

TITLE: Evaluation of Parker Compound KB163-90 (21379)
PURPOSE: To obtain general information.

Recommended temperature limits: -25^0F to $300/325^0$F

Recommended For
High temperature hydraulics
Petroleum based hydraulic oil, motor oil, transmision fluid, grease
R134a
Water/glycol/steam
HFA, HFB, and HFC fluids
Ozone, aging, and weather resistance

Not Recommended For
Polar solvents (ketones and esters)
Strong acids
Chlorinated hydrocarbons
Auto and aircraft brake fluids

Parker O-Ring Division
2360 Palumbo Drive
Lexington, Kentucky 40509
(859) 269-2351

Compound Data Sheet
Parker O-Ring Division United States

REPORT DATA

	Test Results
Original Physical Properties, ASTM D412, D2240	
Hardness, Shore A, pts.	88
Tensile Strength, psi	3219
Ultimate Elongation, %	107
Modulus @ 50%, psi	1552
Compression Set, ASTM D395 Method B (70 hrs. @ 302ºF)	
Percent of Original Deflection (0.070 in C/S o-ring)	46
Percent of Original Deflection (0.103 in C/S o-ring)	42
Percent of Original Deflection (0.139 in C/S o-ring)	32
Percent of Original Deflection (0.210 in C/S o-ring)	23
Percent of Original Deflection (0.275 in C/S o-ring)	19
Percent of Original Deflection (plied)	22
Compression Set, ASTM D395 Method B (1000 hrs. @ 121ºF)	
Percent of Original Deflection (0.070 in C/S o-ring)	72
Percent of Original Deflection (0.103 in C/S o-ring)	73
Percent of Original Deflection (0.139 in C/S o-ring)	73
Percent of Original Deflection (0.210 in C/S o-ring)	61
Percent of Original Deflection (0.275 in C/S o-ring)	48
Dry Heat Resistance, ASTM D573 (70 hrs. @ 302ºF)	
Hardness Change, pts.	+3
Tensile Change, %	+22
Elongation Change, %	-14
Fluid Immersion, ASTM D471 ASTM #1 Oil, (70 hrs. @ 302ºF)	
Hardness Change, pts.	+2
Tensile Change, %	+29
Elongation Change, %	0
Volume Change, %	-2
Fluid Immersion, ASTM D471 IRM 903 Oil, (70 hrs. @ 302ºF)	
Hardness Change, pts.	-7
Tensile Change, %	+15
Elongation Change, %	+3
Volume Change, %	+8
Fluid Immersion, ASTM D471 Test 15W-40 Diesel Engine Oil, (1000 hrs. @ 257ºF) Results	
Hardness Change, pts.	+3
Tensile Change, %	+13
Elongation Change, %	-28
Volume Change, %	+1

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Fluid Immersion, ASTM D471
Cool-Gard ELC, (1000 hrs. @ 257ºF)

Hardness Change, pts.	+2
Tensile Change, %	+12
Elongation Change, %	-3
Volume Change, %	+2

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