



# COMPOUND DATA SHEET

Parker O-Ring Division, North America

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## MATERIAL REPORT

Report Number: 88895  
Date: 8/10/2012

**Title:** Evaluation of Parker Compound VB185-70

**Elastomer Type:** Fluorocarbon (FKM)

**Purpose:** To obtain typical test data.

**Specification:** ASTM D2000 M2HK707 B37 B38 EF31 E078 Z1 (Specific Gravity), Z2 (TR-10), Z3 Tensile Change % after Heat Age -45

**Color:** Black

**Recommended Temperature Range:** -15°F to 400°F

**Recommended For:** Mineral oil and grease, ASTM No. 1 oil, IRM 902 oil, IRM 903 oil, non-flammable hydraulic fluids, silicone oils and greases, aliphatic hydrocarbons (propane, butane, natural gas), aromatic hydrocarbons (benzene, toluene), chlorinated hydrocarbons (trichloroethylene and carbon tetrachloride), gasoline, high vacuum, ozone, weather, and aging resistance.

**Not Recommended For:** Glycol based brake fluids, ammonia gas, amines, alkalis, superheated steam, and low molecular weight organic acids (formic and acetic acids).

**Additional Approvals:** N/A

## REPORT DATA

<u>Original Physical Properties</u>	<u>Test Method</u>	<u>Spec Limits</u>	<u>Test Results</u>
Hardness, Shore A, pts.	ASTM D2240	70 ±5	71
Tensile Strength, PSI (Mpa)	ASTM D412	1015 (7)	3536 (24)
Ultimate Elongation, %	ASTM D412	175	400
<b>(Z1) Specific Gravity</b>	ASTM D297	as received	1.85
<b>Fluid Resistance (Basic Requirement)</b>			
<b><u>IRM 903, 70 hrs @ 302°F</u></b>			
Volume Change, %	ASTM D471	+10	+2
<b>Heat Age (Basic Requirement)</b>			
<b><u>70 hrs. @ 482°F</u></b>			
Hardness Change, pts.	ASTM D573	+10	-1
<b>(Z3) Tensile Strength Change, %</b>		-45	-33
Ultimate Elongation Change, %		-25	+7
<b>(B37) Compression Set (Plied)</b>			
<b><u>22 hrs. @ 347°F</u></b>			
Percent of Original Deflection, Max	ASTM D395 Method B	50	13
<b>(B38) Compression Set (Plied)</b>			
<b><u>22 hrs. @ 392°F</u></b>			
Percent of Original Deflection, Max	ASTM D395 Method B	50	22
<b>(EF31) Fluid Resistance</b>			
<b><u>Fuel C, 70 hrs @ 73°F</u></b>			
Hardness Change, pts.	ASTM D471	± 5	-1
Tensile Strength Change, %		-25	-21
Ultimate Elongation Change, %		-20	-12
Volume Change, %		0 to +10	+3
<b>(E078) Fluid Resistance</b>			
<b><u>Service Fluid 101, 70 hrs @ 392°F</u></b>			
Hardness Change, pts.	ASTM D471	-15 to +5	-6
Tensile Strength Change, %		-40	-21
Ultimate Elongation Change, %		-20	-2
Volume Change, %		0 to +15	+9
<b><u>(Z2) Low Temperature Resistance</u></b>			
TR-10, temperature °F , C	ASTM D1329	report	+2 (-16)

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