



# COMPOUND DATA SHEET

Parker O-Ring & Engineered Seals Division, North America

## MATERIAL REPORT



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**Title:** Evaluation of Parker Compound VA090-90

**Elastomer Type:** Fluorocarbon (FKM)

**Purpose:** To obtain typical test data. 387827-392290

**Color:** Black

**Specification:** ASTM D2000 M2HK 910 A1-10 B38 EF31 Z1

Z1 = Comp Set 168 hours @ 200° C max, .139 c/s; Max 45%

### **Recommended**

**Temperature Range:** -15°F to 400°F

### **Recommended For:**

Mineral oil and grease, nonflammable 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).

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# REPORT DATA

<u>Original Physical Properties</u>	<u>Test Method</u>	<u>Spec Limits</u>	<u>VA090-90</u>
Hardness, Shore A, pts	ASTM D2240	90 ± 5	86
Tensile Strength, psi, Min	ASTM D412	1450	2221
Ultimate Elongation, % Min	ASTM D412	100	130
<b><u>BASIC = IRM 903 Test Fluid, 70 hrs @ 302°F (150°C)</u></b>			
Volume Change, %	ASTM D471	+10	1
<b><u>A1-10 Heat Age – 70 hrs @ 482°F (250°C)</u></b>			
Hardness Change, pts.	ASTM D573	+10	3
Tensile Strength Change, %, Max		-25	-4
Elongation Change, %, Max		-25	-11
<b><u>B38 Compression Set (Plied) 22 hrs @ 392°F (200°C)</u></b>			
Percent of Original Deflect, Max	ASTM D395 Method B	50	16
<b><u>EF31 Fluid Resistance Fuel C, 70 hrs @ 73°F (23°C)</u></b>			
Hardness, Shore A, pts	ASTM D471	±5	-3
Tensile Strength, psi, Min		-25	-12
Ultimate Elongation, % Min		-20	-8
Volume Change, %		0 to +10	3
<b><u>(Z1) Compression Set .139" thick cross section Air, 168 hrs @ 392°F (200°C)</u></b>			
Percent of Original Deflection, Max	ASTM D395 ASTM D1414	45	36