



# COMPOUND DATA SHEET

Parker O-Ring Division, North America

## MATERIAL REPORT

Report Number: 90031  
Date: 10/25/2012



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**Title:** Evaluation of Parker Compound VG109-90

**Elastomer Type:** Fluorocarbon (FKM)

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

**Specification:** ASTM D2000 M3HK910 B37 B38 E078 Z1 (Specific Gravity), Z2 (TR-10)

**Color:** Black

**Recommended Temperature Range:** -50°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:** ISO23936-2 RGD

## 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	90 ±5	89
Tensile Strength, PSI (Mpa)	ASTM D412	1450 (10)	2348
Ultimate Elongation, %	ASTM D412	100	115
<b>(Z1) Specific Gravity</b>	ASTM D297	as received	1.74
<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	±15	+1
Tensile Strength Change, %		±30	-13
Ultimate Elongation Change, %		-50	-37
<b>(B37) Compression Set (Plied)</b>			
<b><u>22 hrs. @ 347°F</u></b>			
Percent of Original Deflection, Max	ASTM D395 Method B	30	9
<b>(B38) Compression Set (Plied)</b>			
<b><u>22 hrs. @ 392°F</u></b>			
Percent of Original Deflection, Max	ASTM D395 Method B	50	10
<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	-31
Ultimate Elongation Change, %		-20	+6
Volume Change, %		0 to +15	+7
<b><u>(Z2) Low Temperature Resistance</u></b>			
TR-10, temperature °F , C	ASTM D1329	report	-37(-38)

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