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Compound Data Sheet
Parker O-Ring Division United States

MATERIAL REPORT

REPORT NUMBER: KA2244
DATE: 4/24/89

TITLE: Evaluation of Parker Compound V0709-90 to MIL-R-83248A
Type 1, Class II, Specifications
PURPOSE: To document conformance of First Article testing.
CONCLUSION: Compound V0709-90 meets the specification requirements.

Recommended temperature limits: -15⁰F to 400⁰F

Recommended For

Petroleum, mineral, and vegetable oils
Silicone fluids
Aromatic hydrocarbons (benzene, toluene)
Chlorinated hydrocarbons
High vacuum
Ozone, weather, and aging resistance

Not Recommended For

Hot water and steam
Auto and aircraft brake fluids
Amines
Ketones
Low molecular weight esters and ethers

Parker O-Ring Division
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REPORT DATA

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<u>ORIGINAL PHYSICALS</u>	SCR 2099 MIL-R-83248A, Class 2, Type 1 <u>SPECIFICATION</u>	Compound: V0709-90 Batch No.: 801050 <u>RESULTS</u>
Hardness, Shore A, pts.	90 ± 5	89
Tensile Strength, psi. min.	1400	2001
Elongation, % min.	125	139
Specific Gravity	As determined	1.84
Temperature retraction, 10% (TR-10), °F max.	±5	-8
Compression set, % of original deflection (after 70 hrs @ 75 ± 5°F), max. Type 1		
Under 0.100 inch	25	
Over 0.100 inch	20	15
<u>AIR AGE, 70 HRS. @ 528°F ± 5°F</u>		
Hardness Change, pts.	+10, -5	+3
Tensile Strength, % max.	45	-31
Elongation, % max.	20	-4
Weight loss, % max.	10	5
<u>AIR AGE, 166 HRS @ 347°F ± 5°F, COMPRESSION SCT. % OF ORIGINAL deflection, max.</u>		
Standard reading Type 1		
Under 0.100 inch	45	
Over 0.100 inch	30	21
<u>OIL AGE, 70 HRS. @ 347°F ± 5°F, IN AMS-3021</u>		
Hardness change, pts.	+0, -15	-7
Tensile Strength, % max.	30	-21
Elongation, % max.	20	+1
Volume Change, %	+1 to +20	+14
Compression set, % of original deflection, max.		
Standard reading		
Under 0.100 inch	30	
Over 0.100 inch	15	12



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	SCR 2099 MIL-R-83248A, Class 2, Type 1	
	<u>SPECIFICATION</u>	<u>RESULTS</u>
<u>FUEL AGE, 70 HRS. @ 75° ± 5°F</u> <u>IN TT-S-735, TYPE III</u>		
Tensile strength, decrease, % max.	20	-4
Ultimate elongation decrease, % max.	20	+5
Hardness Change, pts.	±5	-4
Volume Change, %	+1 to +10	+2
 <u>HUMIDITY AGING, 2-214 O-RINGS</u> <u>28 DAYS @ 7.7° ± 2°F AND 95%</u> <u>RELATIVE HUMIDITY PROPERTIES</u>		
Tensile Strength, psi. min.	1400	1815
Elongation, % min.	100	145
Tensile Strength decrease, % max. <u>1/</u>	10	-9
Elongation decrease, %, max., <u>1/</u>	10	-4
 <u>AIR AGE, 70 HRS. @ 528° ± 5°F</u>		
Tensile Strength decrease, %, max., <u>2/</u>	45	-20
Elongation decrease, %, max., <u>2/</u>	25	-7
 <u>AIR AGE, 166 HRS. @ 347° ± 5°F</u>		
Compression set, % of original deflection, max.	30	14
 <u>AIR AGE, 22 HRS. @ 392° ± 5°F</u>		
Compression set, % of original deflection, max.	25	10
 <u>OIL AGE, 70 HRS. @ 347° ± 5°F</u> <u>IN AMS 3021</u>		
Tensile Strength decrease, %, max., <u>2/</u>	30	9
Elongation decrease, %, max. <u>2/</u>	20	0
Compression set, % of original deflection, max.	15	9