



MATERIAL REPORT



REPORT NUMBER: KA2244
DATE: 4/24/89

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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



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 |



Compound Data Sheet
Parker O-Ring Division United States

| | 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 |