MATERIAL REPORT

REPORT NUMBER: KK2203
DATE: 03/05/98

TITLE: Evaluation of Parker Compound V8545-75 to the testing requirements of AMS 7257 C

PURPOSE: To verify that Parker Compound V8545-75 meets all phases of the specification.

CONCLUSION: Parker Compound V8545-75 meets all phases of the specification.

Recommended temperature limits: 5 to 572 °F

Recommended For
Aliphatic and aromatic hydrocarbons
Chlorinated hydrocarbons
Polar solvents (acetone, methylethylketone, dioxane)
Inorganic and organic acids
Water and steam
High vacuum with minimal loss in weight
Petroleum oil
Wet/dry chlorine

Not Recommended For
Fluorinated refrigerants (R11, 12, 13, 113, 114)
Uranium hexafluoride
Molten Metals
Gaseous and alkali metals
# REPORT DATA

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<table>
<thead>
<tr>
<th>Original Physical Properties, ASTM D1414</th>
<th>AMS 7257C Requirements</th>
<th>2-214 O-Rings Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness, Shore A, pts</td>
<td>70 to 80</td>
<td>79</td>
</tr>
<tr>
<td>Tensile Strength, psi, (MPa), min</td>
<td>1500 (10.3)</td>
<td>1859</td>
</tr>
<tr>
<td>Elongation, %, min</td>
<td>120</td>
<td>175</td>
</tr>
</tbody>
</table>

**Heat Aging (70 hrs. @ 290°C), ASTM D573**

- Hardness Change, pts, max: -5 to +5, -1
- Tensile Strength Change, %, max: -20, +10
- Elongation Change, %, max: -15, -2
- Weight Loss, %, max: 5, 3.3

**Compression Set (70 hrs. @ 125°C), ASTM D1414**

- Permanent Compression Set, %, max: 40, 31

**Fluid Aging**

AMS 3021 (70 hrs. @ 175°C), ASTM D471

- Hardness Change, pts, max: -5 to +5, -2
- Tensile Strength Change, %, max: -10, -6
- Elongation Change, %, max: -15, +2
- Volume Change, %: 0 to +5, +1.2

**Fluid Aging**

AS 1241 Type IV Class 1 (70 hrs. @ 125°C), ASTM D471

- Hardness Change, pts, max: -15 to 0, -2
- Tensile Strength Change, %, max: -40, -12
- Elongation Change, %, max: -15, +23
- Volume Change, %: 0 to +15, +5.1

**Fluid Aging**

ASTM Fuel B (70 hrs. @ 68 to 86 °F), ASTM D471

- Hardness Change, pts, max: -5 to +5, +1
- Tensile Strength Change, %, max: -20, +6
- Elongation Change, %, max: -15, +8
- Volume Change, %: 0 to +5, +0.3

**Low Temperature Resistance**

- \( TR_{10} \) point, °C, (°F), max: +5 (+41), +0.6

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