



MATERIAL REPORT

Report Number: KK2224

Date: 1/16/97

TITLE: Evaluation of Parker Compound E0540-80 to ASTM D200 line call out M3DA 808 A26 B36 G21 Z1 Z2 Z3 Z4 Z5 Z6

PURPOSE: To verify that E0540-80 meets the above specification.

CONCLUSION: Parker Compound E0540-80 meets or exceeds all phases of the specification.

Recommended temperature limits: -70°F to 250 °F

Recommended For

Hot water and steam

Glycol based brake fluid

Many organic and inorganic acids

Cleaning agents, soda and potassium alkalis

Phosphate –ester based hydraulic fluids

Silicone oil and grease

Polar solvents

Ozone, Aging and weather resistance

Not Recommended For

Mineral oil products



REPORT DATA

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| <u>Original Physical Properties, ASTM D412</u> | <u>M3DA 807 A26</u> | <u>E0540-80</u> |
|--|----------------------|-----------------|
| | <u>B36 G21 Z1-Z7</u> | <u>Platen</u> |
| | <u>Results</u> | |
| Hardness, Shore A, pts (Z1) | 70 to 80 | 78 |
| Tensile Strength, psi, (MPa), min | 1160 (8.0) | 1580 (10.9) |
| Elongation, %, min | 150 | 174 |
| <u>A26 Heat Aging (70 hrs. @ 150°C), ASTM D573</u> | | |
| Hardness Change, pts, max | +/- 10 | +7 |
| Tensile Strength Change, %, max | +/- 30 | -13.5 |
| Elongation Change, %, max | -50 | -13.2 |
| <u>B36 Compression Set (22 hrs. @ 150°C), ASTM D395</u> | | |
| Permanent Compression Set, %, max (Z7) | 30 | 25 |
| <u>G21 Tear Resistance, ASTM D624, Die C</u> | | |
| KN/m (psi) | 17 (107.6) | 21.3 (135) |
| <u>Heat Age, SAE J2236, 1000 Hrs @ 135°C (Z2)</u> | | |
| Tensile Strength Change, %, max | -70 | -56.8 |
| Elongation Change, %, max | -70 | -57.1 |
| <u>GM8277M Coolant (70 Hrs @ 150°C), ASTM D471 (Z3)</u> | | |
| Tensile Strength Change, %, max | -50 | -5.4 |
| Elongation Change, %, max | -35 | +9.2 |
| Volume Change, % | +35 | -0.7 |
| <u>Compressive Stress Relaxation (Z4)</u> | | |
| <u>Test Method ISO 3384</u> | | |
| % Sealing Force Retained, min | 20 | 54.4 |
| <u>Low Temperature Retraction (Z5)</u> | | |
| TR-10 ASTM D1329 | -40°C | -49°C |
| <u>Test on 2-214 O-Rings (Z6)</u> | | |
| <u>Heat Aging (70 hrs. @ 150°C), ASTM D865</u> | | |
| Hardness Change, pts, max | +10 | +5 |
| Tensile Strength Change, %, max | -20 | -16.2 |
| Elongation Change, %, max | -20 | +24.7 |