



# MATERIAL REPORT

REPORT NUMBER: KK0922  
DATE: 12/04/78

**TITLE:** Evaluation of High Temperature Parker Compound S0455-70  
To ASTM D200 7GE707 A19 B37 E16 F19 L14  
**PURPOSE:** To determine if S0455-70 meets the callout.  
**CONCLUSION:** Compound S0455-70 meets the ASTM D2000 callout.

Recommended temperature limits: -65<sup>0</sup>F to 450/500<sup>0</sup>F

Recommended For

Extreme Dry heat  
Some petroleum oils  
Moderate water resistance  
Fire resistant hydraulic fluids (HFD-R and HFD-S)  
Ozone, aging, and weather resistance  
Low temperature

Not Recommended For

Ketones  
Acids  
Silicone oils  
Auto and aircraft brake fluid



**Compound Data Sheet**  
Parker O-Ring Division United States

**REPORT DATA**

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|  | ASTM D2000<br><b>7GE707 A19 B37 E16</b><br><b>F19 G11 L14</b><br><u>Pass / Fail Limits</u> | <b>S0455-70</b><br><u>Slab Results</u> | <b>S0455-70</b><br><u>2-214 O-Rings</u> |
|--|--|--|---|
| <u>Basic Physical Properties</u>   |  |  |   |
| Hardness   | 70 +/- 5   | 72                                     | 70                                      |
| Tensile Strength, psi min.   | 700  | 956                                    | 785                                     |
| Elongation, % min.   | 150  | 152                                    | 197                                     |
| Tear (Die B) min.  | 50   | 57                                     | --                                      |
| <u>ASTM D573 Heat Aging, 70 H @ 437°F</u>  |  |  |   |
| Hardness Change, pts max   | +10  | -1                                     | +2                                      |
| Tensile Change, % max  | -25  | -8.9                                   | -5.0                                    |
| Elongation Change, % max   | -30  | -19.3                                  | -5.0                                    |
| <u>Compression Set ASTM D395,</u><br><u>22 HRS @ 347°F</u>                           |  |  |   |
| % of Original Deflection, max  | 30   | 7.7                                    | 5.8                                     |
| <u>Fluid Immersion, ASTM #1 Oil,</u><br><u>70 HRS @ 302°F</u>                        |  |  |   |
| Hardness Change, pts   | -40  | -24                                    | -11                                     |
| Volume Change, %   | +60  | +36.3                                  | +34.8                                   |
| <u>Fluid Immersion ASTM D471 Water</u><br><u>70 HRS. @ 212°F</u>                     |  |  |   |
| Hardness Change, pts. max.   | +/-5   | -2                                     | +1                                      |
| Volume Change, % max.  | +/-5   | +0.04                                  | -0.03                                   |
| <u>Low Temperature Test ASTM D746</u><br><u>Procedure B</u><br><u>3 min. @ -67°F</u> | Pass   | Pass                                   | --                                      |