



# MATERIAL REPORT

REPORT NUMBER: KK2205  
DATE: 8/22/95

**TITLE:** Evaluation of Parker Compound N1231-80  
**PURPOSE:** To obtain general information.

Recommended temperature limits: -25<sup>0</sup>F to 300/325<sup>0</sup>F

Recommended For

Explosive Decompression Resistance  
Petroleum based hydraulic oil, motor oil, transmission fluid,  
grease  
R134a  
Water/glycol/steam  
HFA, HFB, and HFC fluids  
Ozone, aging, and weather resistance

Not Recommended For

Polar solvents (ketones and esters)  
Strong acids  
Chlorinated hydrocarbons  
Auto and aircraft brake fluids



## REPORT DATA

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| <u>Original Physical Properties</u> | N1231-80<br><u>Results</u> |
|-------------------------------------|----------------------------|
| Hardness, Shore A, pts, 2           | 81                         |
| Tensile, Kg/cm, 2, min.             | 240                        |
| Elongation, %, min.                 | 297                        |
| <br>                                |                            |
| <u>Heat Aging</u>                   |                            |
| <u>70 Hrs. @ 150°C (302°F)</u>      |                            |
| Hardness, Change, pts.              | +4                         |
| Tensile, Change, %, max             | -8.5                       |
| Elongation, Change, %               | -20.2                      |
| <br>                                |                            |
| <u>Compression Set</u>              |                            |
| <u>70 Hrs. @ 150°C (302°F)</u>      |                            |
| % of Original Deflection, max.      | 27.1                       |
| <br>                                |                            |
| <u>ASTM Oil #1</u>                  |                            |
| <u>70 Hrs. @ 150°C (302°F)</u>      |                            |
| Hardness, Change, pts               | +3                         |
| Tensile, Change, %, max             | +3.8                       |
| Elongation, Change, %, max          | -7.1                       |
| Volume, Change, %                   | -1.3                       |
| <br>                                |                            |
| <u>Sunisco 5GS Oil</u>              |                            |
| <u>70 hrs. @ 150°C (302°F)</u>      |                            |
| Hardness, Change, pts               | -2                         |
| Tensile, Change, %, max             | -1.8                       |
| Elongation, Change, %, max          | -5.1                       |
| Volume, Change, %                   | +7.5                       |
| <br>                                |                            |
| <u>ND8 Oil</u>                      |                            |
| <u>70 hrs. @ 150°C (302°F)</u>      |                            |
| Hardness, Change, pts               | +2                         |
| Tensile, Change, %, max             | +6.1                       |
| Elongation, Change, %, max          | -20.2                      |
| Volume, Change, %                   | -0.2                       |
| <br>                                |                            |
| <u>Heat Age</u>                     |                            |
| <u>560 hrs. @ 120°C</u>             |                            |
| Hardness, Change, pts               | +4                         |
| Tensile, Change, %                  | +8.7                       |
| Elongation, %                       | -14.6                      |



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

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|                          |               |
|--------------------------|---------------|
| Heat Age                 | N1231-80      |
| <u>560 hrs. @ 150°C</u>  | <u>Result</u> |
| Hardness, Change, pts    | +9            |
| Tensile, Change, %       | +4.1          |
| Elongation, %            | -45.5         |
| Heat Age                 |               |
| <u>1000 hrs. @ 120°C</u> |               |
| Hardness, Change, pts    | +6            |
| Tensile, Change, %       | +2.1          |
| Elongation, %            | -17.7         |
| Compression Set          |               |
| <u>70 hrs. @ 120°C</u>   | 28.9          |
| % of Original Deflection | 33.3          |
| Compression Set          |               |
| <u>140 hrs. @ 120°C</u>  | 35.7          |
| % of Original Deflection | 38.9          |
| Compression Set          |               |
| <u>140 hrs. @ 150°C</u>  | 71.4          |
| % of Original Deflection | 79.4          |
| Compression Set          |               |
| <u>280 hrs. @ 120°C</u>  | 51.4          |
| % of Original Deflection | 55.6          |
| Compression Set          |               |
| <u>280 hrs. @ 150°C</u>  | 84.3          |
| % of Original Deflection | 88.2          |
| Compression Set          |               |
| <u>560 hrs. @ 120°C</u>  | 65.7          |
| % of Original Deflection | 67.6          |
| Compression Set          |               |
| <u>560 hrs. @ 150°C</u>  |               |
| % of Original Deflection | 91.4          |
| Compression Set          |               |
| <u>1000 hrs. @ 120°C</u> |               |
| % of Original Deflection | 79            |