



**R.E.A.L. SEAL CO.**  
**MATERIAL DATA SHEET**  
**COMPOUND # 4190**

| <u>ORIGINAL PHYSICAL PROPERTIES</u>      | <u>SPEC</u> | <u>4190</u> |
|--|-------------|-------------|
| HARDNESS, SHORE A PTS                    | 90 +/- 5    | 87          |
| ULTIMATE TENSILE STRENGTH, PSI           | 1450 MIN    | 1855        |
| ULTIMATE ELONGATION, %                   | 100 MIN     | 128         |
| MODULUS @ 100%                           | ----        | 1048        |
| <br><u>HEAT RESISTANCE (ASTM D 573)</u>  |             |             |
| <u>70 HRS @ 100 C</u>                    |             |             |
| CHANGE IN HARDNESS, PTS                  | +15 MAX     | +5          |
| CHANGE IN TENSILE, %                     | -20 MAX     | -9          |
| CHANGE IN ELONGATION, %                  | -40 MAX     | -17         |
| <br><u>COMPRESSION SET (ASTM D 395B)</u> |             |             |
| <u>22HRS @ 100C</u>                      |             |             |
| % SET                                    | 25 MAX      | 9           |
| <br><u>COMPRESSION SET (ASTM D 395B)</u> |             |             |
| <u>70HRS @ 100C</u>                      |             |             |
| % SET                                    | 25 MAX      | 13          |
| <br><u>WATER RESISTANCE (ASTM D 471)</u> |             |             |
| <u>70 HRS @ 100 C</u>                    |             |             |
| CHANGE IN HARDNESS, PTS                  | +/- 10 MAX  | +1          |
| CHANGE IN VOLUME, %                      | +/- 15 MAX  | +1          |
| <br><u>FUEL RESISTANCE (ASTM D 471)</u>  |             |             |
| <u>70 HRS @ 23 C IN FUEL A</u>           |             |             |
| CHANGE IN HARDNESS, PTS                  | +/-10 MAX   | +2          |
| CHANGE IN TENSILE, %                     | -25 MAX     | -12         |
| CHANGE IN ELONGATION, %                  | -25 MAX     | -18         |
| CHANGE IN VOLUME, %                      | -5 TO +10   | +3          |
| <br><u>FUEL RESISTANCE (ASTM D 471)</u>  |             |             |
| <u>70 HRS @ 23 C IN FUEL C</u>           |             |             |
| CHANGE IN HARDNESS, PTS                  | +/- 10 MAX  | -8          |
| CHANGE IN TENSILE, %                     | -75 MAX     | -33         |
| CHANGE IN ELONGATION, %                  | -75 MAX     | -24         |
| CHANGE IN VOLUME, %                      | +50 MAX     | +26         |

OIL RESISTANCE (ASTM D 471)

70 HRS IN OIL #1 @ 100 C

|                         |           |     |
|-------------------------|-----------|-----|
| CHANGE IN HARDNESS, PTS | -5 TO +15 | +2  |
| CHANGE IN TENSILE, %    | -25 MAX   | -7  |
| CHANGE IN ELONGATION, % | -45 MAX   | -14 |
| CHANGE IN VOLUME, %     | -10 TO +5 | -4  |

OIL RESISTANCE (ASTM D 471)

70 HRS IN OIL # IRM903 @ 100 C

|                         |          |     |
|-------------------------|----------|-----|
| CHANGE IN HARDNESS, PTS | 0 TO -20 | -2  |
| CHANGE IN TENSILE, %    | -45 MAX  | -11 |
| CHANGE IN ELONGATION, % | -45 MAX  | -18 |
| CHANGE IN VOLUME, %     | 0 TO +25 | +8  |

COLOR

REPORT

BLACK