**Parker Hannifin Corporation**
**EPS Division**
Tel: 800-233-3900
www.parker.com/eps

# Technical Data Sheet
## 5400/ IP-9901-A90 / L7

**Material:** NBR
**Parker Material Code:** 5400/IP-9901-A90/L7
**Color:** Black
**Description:** The NBR lip material has very good resistance to oil and gasoline. Superior resistance to petroleum based hydraulic fluids. Good resistance to hydrocarbon solvents. Very good resistance to alkalis and solvents. Poor resistance to oxygenated solvents.

## TYPICAL PHYSICAL / MECHANICAL / THERMAL PROPERTIES

| *PROPERTY* | *UNIT* | *TEST METHOD* | Typical Values |
|---|---|---|---|
| **Hardness** | Shore A | ASTM D2240 | 90 |
| **Tensile Strength at Break** | psi | ASTM D412 | 1800 |
| **Modulus 50%** | psi | ASTM D412 | 1500 |
| **Modulus 100%** | psi | ASTM D412 | - |
| **Elongation at Break** | % | ASTM D412 | 90 |
| **Specific Gravity** | - | ASTM D792 | 1.40 |
| **Compression Set 22 hours @ 212 °F** | % | ASTM D395 | 14 |
| **Tear Strength – Die C** | lbf/in | ASTM D624 | 200 |
| **Glass Transition Temperature** | °F | ASTM D3418 | -33 |
| **Coefficient of Friction** | - | ASTM D1894 | 0.348 |
| **Service Temperature Range** | °F | Parker Internal | -33 to 250 |

**Notes:**

* We emphasize that this tabulation should be used as a guide only. It is based primarily on laboratory and service tests but does not consider all variables that can be encountered in actual use. Therefore, it is always advisable to test the material under actual service conditions before specification. If this is not practical, tests should be devised that simulate service conditions as closely as possible.
* Parker EPS Division also offers unique material blends and recipes along with a wide variety of other filler combinations and colors to enhance seal performance in the most extreme application needs. For guidance on material selection for extreme applications, please contact an EPS Division Application Engineer at 800-233-3900.
* [1]Samples are from Material Validation lot. Values may vary from lot to lot.

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## FLUID COMPATIBILITY[1]

**70 HRS @ Room Temperature**

| *Media* | *Test Method* | *Shore A* | *Modulus 50% / 100% (psi)* | *Ultimate Tensile (psi)* | *Elongation (%)* | *% Weight Change* | *% Volume Change* |
|---|---|---|---|---|---|---|---|
| Fuel A | ASTM D471 | 81 | 1586 / NA | 1766 | 71 | 0% | 2% |
| Fuel B | | 81 | 1472 / NA | 1620 | 62 | 3% | 7% |
| Fuel C | | 80 | 1322 / NA | 1510 | 63 | 4% | 9% |
| Methanol | | 85 | 1378 / NA | 1629 | 70 | 1% | 3% |
| Jet Fuel A | | 85 | 1335 / NA | 1630 | 74 | 3% | 5% |

**168 HRS @ 212 °F**

| *Media* | *Test Method* | *Shore A* | *Modulus 50% / 100% (psi)* | *Ultimate Tensile (psi)* | *Elongation ( %)* | *Weight Change* | *Volume Change* |
|---|---|---|---|---|---|---|---|
| IRM 901 | ASTM D471 | 90 | 1746 / NA | 1895 | 69 | -4% | 6% |
| IRM 903 | | 88 | 1353 / NA | 1603 | 74 | 2% | 3% |
| Mil-H-5606 | | 87 | 1481 / NA | 1894 | 76 | 1% | 3% |
| Jet Oil II | | 85 | 1275 / NA | 1819 | 78 | 9% | 13% |
| Stauffer 7700 | | 83 | 1236 / NA | 1669 | 78 | 8% | 13% |
| Rando HD32 | | 93 | 1649 / NA | 1877 | 64 | -3% | -3% |
| EAL 224H | | 90 | 1533 / NA | 1863 | 70 | -1% | -1% |
| 97% Ethylene Glycol | | 82 | 1200 / NA | 1490 | 63 | 8% | 11% |
| Distilled Water | | 82 | 1031 / NA | 1730 | 85 | 14% | 19% |
| Oven Air Age | | 93 | 2240 / NA | 2209 | 51 | -4% | -5% |
| Super 46 | | 94 | 1806/ N/A | 2092 | 91 | -4% | -5% |

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