Argent

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# PORON® 4701-40 Soft

| PROPERTY | TEST METHOD | VALUE | | |
|---|---|---|---|---|
| **PHYSICAL** | | | | |
| Density, kg/m³ (lb./ft³) | ASTM D3574-95, Test A | 240 (15) | 320 (20) | 480 (30) |
| Tolerance, % | | | ± 10 | |
| Thickness, mm (inches) | | 3.18 - 12.70 (0.125 - 0.500) | 1.57 - 3.18 (0.062 - 0.125) | 0.79 - 1.14 (0.031 - 0.045) |
| Tolerance, % | | ± 10 | ± 10 | ± 20 |
| Standard Color (Code) | | | Black (04) | |
| Compression Force Deflection, kPa (psi)<br>Typical kPa (psi) | 0.51 cm/min (0.2"/min) Strain Rate Force Measured @ 25% Deflection | 27 - 76 (4 -11)<br>41 (5) | 48 - 90 (7 - 13)<br>76 (11) | 104 -276 (15 - 40)<br>173 (25) |
| Hardness, Durometer Shore O<br>Shore A | ASTM D2240-97 | 12<br>8 | 17<br>12 | 34<br>25 |
| Compression Set, % max | ASTM D3574-95 Test D @ 23°C (73°F) | | 5 | |
| | ASTM D3574-95 Test D @ 70°C (158°F) | | 10 | |
| | ASTM D3574-95 Test J/Test D Autoclaved 5 hrs @ 121°C (250°F) | | 5 | |
| Dimensional Stability, % max change | 22 hrs @ 80°C (176°F) in a Forced-Air Oven | | ± 1 | |
| Tensile Strength, Min. kPa (psi) | ASTM D3574-75 Test E | 276 (40) | 518 (75) | 829 (120) |
| Tensile Elongation, % min. | ASTM D3574-75 Test E | | 100 | |
| Tear Strength , Min. kN/m, (pli)<br>Typical kNm, (pli) | ASTM D264-91 Die C | 0.5 (3)<br>1.6 (9) | 0.9 (5)<br>2.1 (12) | 2.1 (12)<br>3.0 (17) |

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| **ELECTRICAL & THERMAL** | | 240 (15) | 320 (20) | 480 (30) |
| Dielectric Constant, K' ("DK") | ASTM D150 @ 22°C (72°F) Relative Humidity 50% for 24 hrs | | 1.71 | |
| Dielectric Strength, kV/m (volts/mil) | ASTM D149-97a | | 1969 (50) | |
| Dissipation Factor, tan D ("DF") | ASTM D150-98 | | 0.05 | |
| Volume Resistivity, ohm-cm (ohm-in) | ASTM D257-99 | | $1 \times 10^{12}$ ($3.9 \times 10^{11}$) | |
| Surface Resistivity, ohm/sq. | ASTM D257-99 | | $2 \times 10^{12}$ | |
| Thermal Conductivity, W/m-K (BTU-in./hr/ft$^2$-F) | ASTM C518-98 | 0.065 (0.45) | 0.080 (0.56) | 0.127 (0.88) |
| Coefficient of Thermal Expansion | | | $2.3 - 3.1 \times 10^{-4}$ in/in/°C ($1.3 - 1.7 \times 10^{-4}$ in/in/°F) | |
| **TEMPERATURE RESISTANCE** | | | | |
| Recommended Constant Use, max. | SAE J-2236 | | 90°C (194°F) | |
| Recommended Intermittent Use, max. | UL JMST2 (UL50 and UL508) | | 121°C (250°F) | |
| Brittleness Temperature | ASTM D746-98 | | -40°C (-40°F) | |
| Cold Flexibility | MIL-P-12420D 1991 @ -40°C (-40°F) | | Pass | |
| **FLAMMABILITY & OUTGASSING** | | | | |
| Flammability, mm (inches) | UL 94HBF‡ (File E20305) (Pass ≥) | 4.8 (0.188) | 1.6 (0.062) | - |
| | FMVSS 302 (Pass ≥) | 4.8 (0.188) | 1.6 (0.062) | - |
| | CSA Comp HBF (File 188149) (Pass≥) | 4.8 (0.188) | 1.6 (0.062) | - |
| Fogging | SAE J-1756 3 hrs @ 100°C (212°F) | Pass | Pass | - |
| Outgassing, Total Mass Loss (TML) % | ASTM E595-93 24 hrs @ 125°C (257°F) @ <7 x $10^3$ kPa | 0.7 | 0.8 | 1.0 |
| Outgassing, Collected Volatile Condensable Materials (CVCM) % | | 0.04 | 0.04 | 0.05 |
| Outgassing, Water Vapor Regain (WVR) % | | 0.3 | 0.3 | 0.62 |

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| **ENVIRONMENTAL** | | 240 (15) | 320 (20) | 480 (30) |
| Gasketing and Sealing | UL JMST2 (Consisting of UL50 & UL508)<br>CAN/CSA-C22.2 No. 94-M91 | File MH15464<br>File 188149 | | - |
| Moisture Absorption, High Humidity Exposure, % Weight Gain, Typical | AMS 3568-95 | 2 | 2 | - |
| Water Absorption, Immersion Testing, % Weight Gain, Typical | ASTM D570-95 | 17 | 15 | 11 |
| UV Resistance | ASTM G53-96 | Good | Good | - |
| Ozone Resistance | GM 4486P-95 | Pass | Pass | - |
| Corrosion Resistance | AMS 3568-91 | Pass | Pass | - |
| Mildew/Bacteria Resistance | ASTM G21 | | Good | |
| Staining | ASTM D925 | | No Stain | |

Notes:

‡Designed to meet UL 94 HBF based upon 2022 test criteria. As of 2023 items with nominal density ≥ 15.6lb/ft$^3$ (250kg/m$^3$) are no longer eligible to be tested for UL 94 HBF but remain equivalent.

- - Represents testing not available at this time.
- All metric conversions are approximate.
- Additional technical information is available.
- Typical values should not be used for specification limits.

To order PORON materials, please contact our Sales Specialists at 860.928.3622 or via email at EMS_CT_cust_serv@rogerscorporation.com

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