

PORON® 4701-60 Very Firm – Data Sheet

| PROPERTY | TEST METHOD | VALUE | | |
|--|---|---|--------------------------------|--------------------------------|
| PHYSICAL | | | | |
| Density, kg /m ³ (lb./ft ³) Tolerance, % | ASTM D 3574-95, Test A | 240 (15) | 320 (20) | 400 (25) |
| | | ± 10 | | |
| Thickness, mm (inches) Tolerance, % | | 3.18 – 6.35 (0.125 - 0.250) | 0.79 – 4.78 (0.031 - 0.188) | 0.79 – 2.36 (0.031 - 0.093) |
| | | ± 10 | | ± 15 |
| Standard Color (Code) | | Black (04) | | |
| Compression Force Deflection Range kPa (psi) Typical kPa (psi) | 0.51 cm/min (0.2" / min) Strain Rate Force Measured @ 25% Deflection | 124-345 (18-50) 249 (36) | 172-586 (25-85) 428 (62) | 345-896 (50-130) 643 (93) |
| | | | | |
| Hardness, Durometer, Shore "O", Shore "A" | ASTM D 2240-97 | 42 | 55 | 63 |
| | | 30 | 42 | 53 |
| Compression Set, % max. | ASTM D 3574-95 Test D @ 23°C (73°F) | 5 | | |
| | ASTM D 3574-95 Test D @ 70°C (158°F) | 10 | | |
| | ASTM D 3574-95 Test J/Test D autoclaved 5 hrs @ 121°C (250°F) | 10 | | |
| Dimensional Stability, % max. change | 22 hrs @ 80°C (176°F) in a forced-air oven | ± 5 | | |
| Tensile Strength, Min. kPa (psi) | ASTM D 3574-75 Test E | 931 (135) | 1382 (200) | 1724 (250) |
| Tensile Elongation, % min. | ASTM D 3574-75 Test E | 50 | 45 | 50 |
| Tear Strength, Min. kN/m (pli), Typical kN/m (pli) | ASTM D 264-91 Die C | 2.1 (12) | 3.0 (17) | 3.3 (19) |
| | | 3.3 (19) | 4.4 (25) | 5.3 (30) |
| ELECTRICAL AND THERMAL | | | | |
| Dielectric Constant, K' ("DK") | ASTM D 150 measurements at 22°C (72°F) relative humidity 50% for 24 hrs. | 1.60 | | |
| Dielectric Strength, volts/mil | ASTM D 149-97a | 50 | | |
| Dissipation Factor, tan D ("DF") | ASTM D 150-98 | 0.05 | | |
| Volume Resistivity, ohm-cm | ASTM D 257-99 | 7 x 10 ¹² | | |
| Surface Resistivity, ohm/sq. | ASTM D 257-99 | 3 x 10 ¹² | | |
| Thermal Conductivity, W/m-C (BTU-in./hr/ft ² -F) | ASTM C 518-98 | - | 0.088 (0.61) | - |
| Coefficient of Thermal Expansion | | 2.3 - 3.1 x 10 ⁻⁴ in/in/°C (1.3-1.7 x 10 ⁻⁴ in/in/°F) | | |

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PORON® 4701-60 Very Firm, Continued

| PROPERTY | TEST METHOD | VALUE | | |
|---|---|-----------------------------|-------------|-------------|
| 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 D 746-98 | -16°C (3°F) | | |
| Cold Flexibility | MIL-P-12420D 1991 @ -40°C (-40°F) | Pass | | |
| FLAMMABILITY AND OUTGASSING | | | | |
| Flammability, mm (inches) | UL 94HBF (File E20305) (Pass ≥) | 3.175 (0.125) | 1.6 (0.062) | - |
| | MVSS 302 (Pass ≥) | 3.175 (0.125) | 1.6 (0.062) | 1.6 (0.062) |
| | CSA Comp HBF (File 188149) (Pass ≥) | 3.175 (0.125) | 1.6 (0.062) | - |
| Fogging | SAE J-1756 3 hrs @ 100°C (212°F) | Pass | | |
| Outgassing, Total Mass Loss (TML) % | ASTM E 595-93 24 hrs @ 125°C (257°F) @ <7x10 ³ Pa | 0.6 | 0.7 | 0.7 |
| Outgassing, Collected Volatile Condensable Materials (CVCM) % | | 0.05 | 0.02 | 0.03 |
| Outgassing, Water Vapor Regain (WVR) % | | 0.5 | 0.5 | 0.6 |
| ENVIRONMENTAL | | | | |
| Gasketing and Sealing | UL JMST2 (UL50 and UL508) CAN/CSA – C22.2 No. 94-M91 | File MH15464 File 188149 | | |
| Moisture Absorption, High Humidity Exposure, % weight gain, typical | AMS 3568-95 | 2 | | |
| Water Absorption, Immersion Testing, % weight gain, typical | ASTM D 570-95 | 19 | 20 | 6 |
| UV Resistance | ASTM G 53-96 | Good | | |
| Ozone Resistance | GM 4486P-95 | Pass | | |
| Corrosion Resistance | AMS 3568-91 | Pass | | |
| Mildew/Bacteria Resistance | ASTM G 21 | Good | | |
| Staining | ASTM D 925 | No Stain | | |
| Skin Contact Irritation | Primary Skin Irritation Test (FHSA) | Pass | | |

Notes:

- - 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

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