



PORON® Polyurethanes



Authorized Distributor,
Converter, and Fabricator
www.jbc-tech.com

Elastomeric Material Solutions
www.rogerscorp.com

Typical Product Properties

PORON® 4701-30 Very Soft – Data Sheet

| PROPERTY | TEST METHOD | VALUE | | |
|--|---|---|------------------------------|--------------------------------|
| PHYSICAL | | | | |
| Density, kg /m ³ (lb / ft ³) | ASTM D 3574-95, Test A | 240 (15) | 320 (20) | 400 (25) |
| Tolerance, % | | ± 10 | | |
| Thickness, mm (inches) | | 4.78 – 12.70 (0.188 - 0.500) | 1.57 – 3.18 (0.062-0.125) | 0.79 – 1.14 (0.031 - 0.045) |
| Tolerance, % | | ± 10 | | ± 15 |
| Standard Color (Code) | | Black (04) | | |
| Compression Force Deflection, kPa (psi) Typical kPa, (psi) | 0.51cm/min (0.2" / min) Strain Rate Force Measured @ 25% Deflection | 7 - 35 (1 – 5) 21 (3) | 21 - 55 (3 – 8) 35 (5) | 35 - 83 (5 – 12) 62 (9) |
| Hardness, Durometer, Shore "O", Shore "A" | ASTM D 2240-97 | <3 <3 | 8 5 | 16 12 |
| Compression Set, % max. | ASTM D 1667-90 Test D @ 23°C (73°F) ASTM D 3574-95 Test D @ 70°C (158°F) ASTM D 3574-95 Test J/Test D autoclaved 5 hrs @ 121°C (250°F) | 2 10 5 | | |
| Dimensional Stability, % max. change | 22 hrs @ 80°C (176°F) in a forced-air oven | ± 1 | | |
| Tensile Strength, kPa (psi) min. Typical kPa (psi) | ASTM D 3574-75 Test E | 138 (20) 207 (30) | 207 (30) 346 (50) | 242 (35) 484 (70) |
| Tensile Elongation, % min., Typical | ASTM D 3574-75 Test E | 100 160 | 100 155 | 100 150 |
| Tear Strength, kN/m (pli) min Typical kN/m (pli) | ASTM D 264-91 Die C | 0.2 (1) 0.9 (5) | 0.5 (3) 1.2 (7) | 0.7 (4) 1.8 (10) |
| ELECTRICAL AND THERMAL | | | | |
| Dielectric Constant, K' ("DK") | ASTM D 150 measurements at 22°C (72°F) relative humidity 50% for 24 hrs. | 1.75 | | |
| Dielectric Strength, kV/m (volts/mil) | ASTM D 149-97a | 1969 (50) | | |
| Dissipation Factor, tan D ("DF") | ASTM D 150-98 | 0.05 | | |
| Volume Resistivity, ohm-cm (ohm-in) | ASTM D 257-99 | 3 x 10 ¹¹ (1.18 x 10 ¹¹) | | |
| Surface Resistivity, ohm/sq. | ASTM D 257-99 | 6 x 10 ¹¹ | | |
| Thermal Conductivity, W/m-C (BTU-in./hr/ft ² -F) | ASTM C 518-98 | - | 0.076 (0.53) | - |
| 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® 4701-30 Very Soft, Continued

| PROPERTY | TEST METHOD | VALUE | | |
|--|---|-----------------------------|-------------|-------------|
| TEMPERATURE RESISTANCE | | | | |
| Recommended Constant Use, max. | SAE J-2236 | 90°C (194°F) | | |
| Recommended Intermittent Use, max. | | 121°C (250°F) | | |
| Embrittlement | ASTM D 746-98 | -51°C (-60°F) | | |
| Cold Flexibility | MIL-P-12420D 1991 @ -40°C (-40°F) | Pass | | |
| FLAMMABILITY AND OUTGASSING | | | | |
| Flammability, mm (inches) | UL 94HBF (File E20305) (Pass ≥) | 4.8 (0.188) | 2.4 (0.093) | - |
| | MVSS 302 (Pass ≥) | 4.8 (0.188) | 1.6 (0.062) | 1.6 (0.062) |
| | CSA Comp HBF (File 188149) (Pass ≥) | 4.8 (0.188) | 2.4 (0.093) | - |
| 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) @ <7kPa (1.02 psi) | 0.8 | 1.0 | 1.3 |
| Outgassing, Collected Volatile Condensable Materials (CVCM) % | | 0.1 | 0.1 | 0.2 |
| Outgassing, Water Vapor Regain (WVR) % | | 0.2 | 0.3 | 0.6 |
| ENVIRONMENTAL | | | | |
| Gasketing and Sealing | UL JMST2 (Consisting of UL50 and UL508) CAN/CSA – C22.2 No. 94-M91 | File MH15464 File 188149 | | |
| Water Absorption, High Humidity Exposure, % weight gain, typical | AMS 3568-95 | 2 | | |
| Water Absorption, Immersion Testing, % weight gain, typical | ASTM D 570-95 | 12 | 9 | 14 |
| UV Resistance | ASTM G 53-96 | Good | | |
| Ozone Resistance | GM 4486P-95 | Pass | Pass | - |
| Corrosion Resistance | AMS 3568-91 | Pass | | |
| Mildew/Bacteria Resistance | ASTM G 21 | Good | | |
| Staining | ASTM D 925 | No Stain | | |

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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