

**PORON® Urethane Foams**

## Product Data Sheet

**PORON® 4701-60 Very Firm**

PROPERTY	TEST METHOD	VALUE		
<b>PHYSICAL</b>				
Density, lb. / ft <sup>3</sup> (kg / m <sup>3</sup> )	ASTM D 3574-95, Test A	15 (240)	20 (320)	25 (400)
Tolerance, %		± 10		
Thickness, inches (mm)		0.125 - 0.250 (3.18 - 6.35)	0.031 - 0.188 (0.79 - 4.78)	0.031 - 0.093 (0.79 - 2.36)
Tolerance, %		± 10		± 15
Standard Color (Code)		Black (04)		
Compression Force Deflection, psi (kPa) Typical psi (kPa)	0.2" / min. Strain Rate Force Measured @ 25% Deflection	18 - 50 (124 - 345) <b>36 (249)</b>	25 - 85 (172 - 586) <b>62 (428)</b>	50 - 130 (345 - 896) <b>93 (643)</b>
Hardness, Durometer, Shore "O", Shore "A"	ASTM D 2240-97	42 <b>30</b>	55 <b>42</b>	63 <b>53</b>
Compression Set, % max.	ASTM D 3574-95 Test D @ 73°F (23°C) ASTM D 3574-95 Test D @ 158°F (70°C) ASTM D 3574-95 Test J/Test D autoclaved 5 hrs @ 250°F (121°C)	5  10  10		
Dimensional Stability, % max. change	22 hrs @ 176°F (80°C) in a forced-air oven	± 5		
Tensile Strength, Min. psi (kPa), Typical psi (kPa)	ASTM D 3574-75 Test E	135 (931) <b>170 (1175)</b>	200 (1382) <b>275 (1901)</b>	250 (1724) <b>380 (2627)</b>
Tensile Elongation, % min., Typical	ASTM D 3574-75 Test E	50 <b>75</b>	45 <b>75</b>	50 <b>75</b>
Tear Strength, Min. pli (kN/m), Typical pli (kN/m)	ASTM D 264-91 Die C	12 (2.1) <b>19 (3.3)</b>	17 (3.0) <b>25 (4.4)</b>	19 (3.3) <b>30 (5.3)</b>
<b>ELECTRICAL AND THERMAL</b>				
Dielectric Constant, K' ("DK")	ASTM D 150 measurements at 72°F (22°C) 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 <sup>12</sup>		
Surface Resistivity, ohm/sq.	ASTM D 257-99	3 x 10 <sup>12</sup>		
Thermal Conductivity, W/m-C (BTU-in./hr/ft <sup>2</sup> -F)	ASTM C 518-98	-	0.088 (0.61)	-
Coefficient of Thermal Expansion		2.3 - 3.1 x 10 <sup>-4</sup> in./in./°C		

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## PORON® 4701-60 Very Firm Continued

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Density, lb. / ft <sup>3</sup> (kg / m <sup>3</sup> )	ASTM D 3574-95, Test A	15 (240)	20 (320)	25 (400)
<b>TEMPERATURE RESISTANCE</b>				
Recommended Constant Use, max.	SAE J-2236	158°F (70°C)		
Recommended Intermittent Use, max.	UL JMST2 ( UL50 and UL508)	250°F (121°C)		
Brittleness Temperature	ASTM D 746-98	3°F (-16°C)		
Cold Flexibility	MIL-P-12420D 1991 @ -40°F (40°C)	Pass		
<b>FLAMMABILITY AND OUTGASSING</b>				
Flammability	UL 94HBF (File E20305) (Pass ≥)	0.125"	0.062"	-
	MVSS 302 (Pass ≥)	0.125"	0.062"	0.062"
	CSA Comp HBF (File 188149) (Pass ≥)	0.125"	0.062"	-
Fogging	SAE J-1756 3 hrs @ 212°F (100°C)	Pass		
Outgassing, Total Mass Loss (TML) %	ASTM E 595-93 24 hrs @ 257°F (125°C) @ <7x10 <sup>3</sup> 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
<b>ENVIRONMENTAL</b>				
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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