

PORON® Urethane Foams
Product Data Sheet
PORON® 4701-60 Very Firm

PROPERTY	TEST METHOD	VALUE		
PHYSICAL				
Density, lb. / ft ³ (kg /m ³)	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) 36 (249)	25 - 85 (172 - 586) 62 (428)	50 - 130 (345 - 896) 93 (643)
Hardness, Durometer, Shore "O", Shore "A"	ASTM D 2240-97	42 30	55 42	63 53
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) 170 (1175)	200 (1382) 275 (1901)	250 (1724) 380 (2627)
Tensile Elongation, % min., Typical	ASTM D 3574-75 Test E	50 75	45 75	50 75
Tear Strength, Min. pli (kN/m), Typical pli (kN/m)	ASTM D 264-91 Die C	12 (2.1) 19 (3.3)	17 (3.0) 25 (4.4)	19 (3.3) 30 (5.3)
ELECTRICAL AND THERMAL				
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 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		

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PORON® 4701-60 Very Firm Continued

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TEMPERATURE RESISTANCE				
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		
FLAMMABILITY AND OUTGASSING				
Flammability	UL 94HBF (File E20305) (Pass ≥) MVSS 302 (Pass ≥) CSA Comp HBF (File 188149) (Pass ≥)	0.125" 0.125" 0.125"	0.062" 0.062" 0.062"	- 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 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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