Product Data Sheet

poron® ALWAYS THERE

PORON® 4701-30 Very Soft

PROPERTY	TEST METHOD	TYPICAL VALUE		
PHYSICAL				
Density, kg/m³ (lb./ft³)	ASTM D3574-95, Test A	240 (15)	320 (20)	400 (25)
Tolerance, %			± 10	
Thickness, mm (inches)		4.78 - 12.7 (0.188 - 0.500)	1.57 - 3.18 (0.062 - 0.125)	0.79 - 1.14 (0.031 - 0.045)
Tolerance, %		± 10	± 10	± 15
Standard Color (Code)			Black (04)	
Compression Force Deflection, kPa (psi)	0.51cm/min (0.2"/min) Strain Rate Force Measured @ 25% Deflection	7 - 35 (1 - 5)	21 - 55 (3 - 8)	35 - 83 (5 - 12)
Typical kPa, (psi)		21 (3)	35 (5)	62 (9)
Hardness, Durometer Shore O	ASTM D2240-97	<3	8	16
Shore A		<3	5	12
Compression Set, % max	ASTM D1667-90 Test D @ 23°C (73°F)		2	
	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, kPa (psi) min.	ASTM D3574-75, Test E	138 (20)	207 (30)	242 (35)
Typical kPa, (psi)		207 (30)	346 (50)	484 (70)
Tensile Elongation, % min.	ASTM D3574-75, Test E	100	100	100
Typical		160	155	150
Tear Strength, kN/m (pli) min.	ASTM D264-91 Die C	0.2 (1)	0.5 (3)	0.7 (4)
Typical kN/m (pli)		0.9 (5)	1.2 (7)	1.8 (10)

ROGERS CORPORATION

PROPERTY	TEST METHOD	TYPICAL VALUE		
ELECTRICAL & THERMAL		240 (15)	320 (20)	400 (25)
Dielectric Constant, K' ("DK")	ASTM D150 Measurements at 22°C (72°F) Relative Humidity 50% for 24 hrs.		1.75	
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		3×10^{11} (1.18×10^{11})	
Surface Resistivity, ohm/sq	ASTM D257-99		6×10^{11}	
Thermal Conductivity, W/m-C (BTU-in./hr/ft^2-F)	ASTM C518-98	-	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)	
TEMPERATURE RESISTANCE				
Recommended Constant Use, max.	SAE J-2236		90°C (194°F)	
Recommended Intermittent Use, max.			121°C (250°F)	
Embrittlement	ASTM D746-98		-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 ≥) FMVSS 302 (Pass ≥) CSA Comp HBF (File 188149) (Pass ≥)	4.8 (0.188) 4.8 (0.188) 4.8 (0.188)	2.4 (0.093) 1.6 (0.062) 2.4 (0.093)	- 1.6 (0.062) -
Fogging	SAE J-1756 3 hrs @ 100°C (212°F)		Pass	
Outgassing, Total Mass Loss (TML) %	ASTM E595-93 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 & Sealing	UL JMST2 (Consisting of UL50 & 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 D570-95	12	9	14
UV Resistance	ASTM G53-96		Good	
Ozone Resistance	GM 4486P-95	Pass	Pass	-
Corrosion Resistance	AMS 3568-91		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