Product Data Sheet

poron® ALWAYS THERE

Ideal CFD Curves for Battery Pad Applications: PORON® 4701-30 Very Soft

PROPERTY	TEST METHOD	VALUE	
PHYSICAL			
Density, kg /m³ (lb. / ft³)	ASTM D3574-95, Test A	240 (15)	320 (20)
Tolerance, %		± 10	
Thickness, mm (inches)		1.3 – 3.0 (0.051 - 0.118)	0.85 – 3.0 (0.033 - 0.118)
Tolerance, %		± 10	
Standard Color (Code)		Black (04)	
Compression Force Deflection, Range kPa (psi)	0.51 cm/min (0.2" / min). Strain Rate Force Measured @ 25% Deflection	7 - 35 (1.0 - 5.0)	21 - 55 (3.0 - 8.0)
Typical kPa (psi)	Force Measured @ 20% Deflection	19.4 (2.8)	34.1 (4.9)
	Force Measured @ 25% Deflection	21.6 (3.1)	38.3 (5.6)
	Force Measured @ 30% Deflection	24.1 (3.5)	42.9 (6.2)
	Force Measured @ 40% Deflection	30.7 (4.4)	55.2 (8.0)
	Force Measured @ 50% Deflection	42.1 (6.1)	77.6 (11.3)
	Force Measured @ 60% Deflection	68.3 (9.9)	136.0 (19.8)
	Force Measured @ 70% Deflection	149.0 (21.7)	345.0 (50.1)
Hardness, Durometer, Shore O Shore A	ASTM D2240-97	< 3 < 3	8 5
Compression Set, % max.	ASTM D3574-95 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, min. kPa, (psi)	ASTM D3574-75 Test E	138 (20)	207 (30)
Tensile Elongation, % min.	ASTM D3574-75 Test E	100	100
Tear Strength, kN/m (pli) min	ASTM D264-91 Die C	0.2 (1)	0.5 (3)
ELECTRICAL AND THERMAL			
Dielectric Constant, K' ("DK")	ASTM D150 Measurements at 22°C (72°F) Relative Humidity 50% for 24 hrs.	1.75	
Dielectric Strength, kN/m (volts/mil)	ASTM D149-97A	1969 (50)	
Dissipation Factor, tan D ("DF")	ASTM D150-98	0.05	

ROGERS CORPORATION

PROPERTY	TEST METHOD	VALUE	
ELECTRICAL AND THERMAL		240 (15)	320 (20)
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 x10^{-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) [Without PET Carrier]	UL 94HBF‡ (File E20305) (Pass ≥) FMVSS 302 (Pass ≥) CSA Comp HBF (File 188149) (Pass ≥)	4.8 (0.188) 2.5 (0.059) 4.8 (0.188)	2.4 (0.093) 1.6 (0.062) 2.4 (0.093)
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) @ <7 kPa (1.02psi)	0.8	
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.1	
Outgassing, Water Vapor Regain (WVR) %		0.2	
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 D570-95	12	9
UV Resistance	ASTM G53-96	Good	
Ozone Resistance	GM 4486P-95	Pass	
Corrosion Resistance	AMS 3568-91	Pass	
Mildew/Bacteria Resistance	ASTM G21	Good	
Staining	ASTM D925	No Stain	

**Products available as unsupported, PET supported, or tacky surface.
**Thickness availability may vary by construction type – contact your local sales or customer service representative

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

For more information and to request a sample, please contact our team of experts at solutions@rogerscorp.com