Product Data Sheet

PORON® 4701-30 Very Soft Supported

PROPERTY	TEST METHOD	TYPICAL VALUE	
PHYSICAL			
Density, kg/m^3 (lb./ft^3)	ASTM D3574-95, Test A	320 (20)	400 (25)
Tolerance, %		± 10	
Thickness, mm (inches)		0.79 - 2.36 (0.031-0.095)	0.53 - 1.19 (0.021- 0.047)
Thickness Tolerance Foam Thickness >0.79mm (0.031") % Foam Thickness ≤0.79mm (0.031")		 ± 10 -	 ± 15 0.08 (0.003)
Standard Color (Code)		Black (04)	
Compression Force Deflection, kPa (psi)	0.51cm/min (0.2"/min) Strain Rate Force Measured @ 25% Deflection	21 - 55 (3 - 8)	35 - 83 (5 - 12)
Typical kPa, (psi)		34 (5.0)	58 (8.4)
Hardness, Durometer Shore O	ASTM D2240-97	8	16
Compression Set, % max	ASTM D3574-95 Test D @ 23°C (73°F) ASTM D3574-95 Test D @ 70°C (158°F) ASTM D3574-95 Test J/Test D Autoclaved 5 hrs @ 121°C (250°F)	4 10 -	
ELECTRICAL & THERMAL			
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	3.1 x 10^{11} (1.22 x 10^{11})	
Surface Resistivity, ohm/sq	ASTM D257-99	5.9 x 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)	

PROPERTY	TEST METHOD	TYPICAL VALUE	
TEMPERATURE RESISTANCE		320 (20)	400 (25)
Recommended Constant Use, max.	SAE J-2236, 3 hrs. @ 100°C (212°F	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 ≥)	- - -	
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)	1.0	1.3
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.1	0.2
Outgassing, Water Vapor Regain (WVR) %		0.3	0.6
ENVIRONMENTAL			
Gasketing & Sealing	UL JMST2 (Consisting of UL50 & UL508) CAN/CSA - C22.2 No. 94-M91	File MH15464 -	
Moisture Absorption, High Humidity Exposure, % Weight Gain, Typical	AMS 3568-95	2	
Water Absorption, Immersion Testing, % Weight Gain, Typical	ASTM D570-95	9	14
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	

The data mentioned above represents results of testing the PORON polyurethane foam only. PORON cellular polyurethane material is supported by being directly cast onto 0.05mm (2 mil) polyester film. By casting directly onto the film, a permanent bond is created. Please see physical property data for the film as represented by manufacturer below.

Supporting Material - Clear Polyester Film (PET)

PROPERTY	TEST METHOD	VALUE
Coefficient of Friction A/B, (Kinetic)	ASTM D1894	0.40
Density, kg/m^3 (lb/ft^3)	ASTM D1505	1395 (87.1)
Modulus, MD, kPa (psi)	ASTM D882	3.5 x 10^6 (500,000)
Shrinkage, MD, % (TD)	39 min. @ 150°C (302°F)	1.2 (0.0)
Tensile Strength, MD, kPa (psi)	ASTM D882	2.1 x 10^5 (30,000)
Ultimate Elongation, %	ASTM D882	150
Yield Strength (F5), kPa (psi)	ASTM D882	1.0 x 10^5 (15,000)

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