

PORON® 92 Extra Soft Slow Rebound

PROPERTY	TEST METHOD	VALUE	
PHYSICAL			
Density, kg/m ³ (lb./ft ³)	ASTM D3574-95, Test A	192 (12)	240 (15)
Tolerance, %		± 10	
Thickness, mm (inches)		3.18 - 10.8 (0.125 - 0.425)	3.18 - 12.7 (0.125 - 0.500)
Tolerance, %		± 10	
Standard Color (Code)		Black (04)	
Compression Force Deflection, kPa (psi)	0.51 cm/min (0.2"/min Strain Rate Force Measured @ 25% Deflection	1.7 - 17 (0.25 - 2.5)	2 - 24 (0.3 - 3.5)
Hardness, Durometer Shore OO	ASTM D2240-97	< 3	< 5
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	
Resilience by Vertical Rebound, %	ASTM D2632-96	4	
Dimensional Stability, % max change	22 hrs @ 80°C (176°F) in a Forced-Air Oven	± 3	± 5
Tensile Strength, min. kPa (psi)	ASTM D3574-75 Test E	83 (12)	103 (15)
Tensile Elongation, % min.	ASTM D3574-75 Test E	150	120
Tear Strength , min. kN/m, (pli)	ASTM D264-91 Die C	0.4 (2)	0.53 (3)
ELECTRICAL & THERMAL			
Dielectric Constant, K' ("DK")	ASTM D150 @ 22°C (72°F) Relative Humidity 50% for 24 hrs	-	1.48
Dielectric Strength, volts/mil	ASTM D149-97a	42	50
Dissipation Factor, tan D ("DF")	ASTM D150-98	-	0.04
Volume Resistivity, ohm-cm	ASTM D257-99	-	8 x 10 ¹¹
Surface Resistivity, ohm/sq.	ASTM D257-99	-	10 x 10 ¹¹
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	VALUE	
TEMPERATURE RESISTANCE		192 (12)	240 (15)
Recommended Constant Use, max.	SAE J-2236	90°C (194°F)	
Recommended Intermittent Use, max.		121°C (250°F)	
Embrittlement	ASTM D746-98	-20°C (-4°F)	
FLAMMABILITY & OUTGASSING			
Flammability, mm (inches)	UL 94HBF [‡] (File E20305) (Pass ≥)	3.94 (0.155)	3.0 (0.118)
	FMVSS 302 (Pass ≥)	3.94 (0.155)	3.0 (0.118)
	CSA Comp HBF (File 188149) (Pass≥)	3.94 (0.155)	3.0 (0.118)
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 x 10³ Pa	0.76	1.73
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.04	0.14
Outgassing, Water Vapor Regain (WVR) %		0.6	0.71
ENVIRONMENTAL			
Gasketing and 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	38	34
Mildew/Bacteria Resistance	ASTM G21	Good	
Staining	ASTM D925	No Stain	

These materials are unsupported and should be processed with the knowledge that stretching of die cut parts can occur when material has not been relaxed.

- Notes:
- ‡Designed to meet UL 94 HBF based upon 2022 test criteria. As of 2023 items with nominal density ≥ 15.6lb/ft³ (250kg/m³) 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

PORON® 4790-92 Extra Soft Slow Rebound (Supported)

PROPERTY	TEST METHOD	VALUE		
PHYSICAL				
Density, kg/m ³ (lb./ft ³)	ASTM D3574-95, Test A	240 (15)	320 (20)	400 (25)
Tolerance			± 10	
Thickness, mm (inches)		1.00 - 3.05 (0.039 - 0.120)	2.06 (0.081)	0.53 - 1.04 (0.021 - 0.041)
Tolerance, %		±10	± 10	± 15
Standard Color (Code)		Black (04)		
Compression Force Deflection, kPa (psi)	0.51 cm/min (0.2"/min) Strain Rate	2 - 24 (0.3 - 3.5)	7 - 35 (1 - 5)	8 - 58 (1.25 - 8.5)
Typical kPa (psi)	Force Measured @ 25% Deflection	12 (1.7)	22 (3.2)	37 (5.3)
Hardness, Durometer Shore O	ASTM D2240-97	2	-	-
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)		-	
Resilience by Vertical Rebound, %	ASTM D2632-96	4	5	-
ELECTRICAL & THERMAL				
Dielectric Constant, K' ("DK")	ASTM D 150 @ 22°C (72°F) Relative Humidity 50% for 24 hrs		1.48	
Dielectric Strength, volts/mil	ASTM D149-97a		50	
Dissipation Factor, tan D ("DF")	ASTM D150-98		0.04	
Volume Resistivity, ohm-cm	ASTM D257-99		8 x10 ¹¹	
Surface Resistivity, ohm/sq.	ASTM D257-99		10x10 ¹¹	
Thermal Conductivity, W/m-C BTU-in./hr/ft ² -F)	ASTM C518-98	0.083 (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	VALUE		
TEMPERATURE RESISTANCE		240 (15)	320 (20)	400 (25)
Recommended Constant Use, max.	SAE J-2236	90°C (194°F)		
Recommended Intermittent Use, max.		121°C (250°F)		
Embrittlement	ASTM D746-98	-20°C (-4°F)	-18°C (0°F)	-12°C (10°F)
Cold Flexibility	MIL-P-12420D 1991 @ -40°C (-40°F)	-		
FLAMMABILITY & OUTGASSING				
Flammability, mm (inches)	UL 94HBF† (File E20305) (Pass ≥)	2.06 (0.081)		
	FMVSS 302 (Pass ≥)	2.06 (0.081)		
	CSA Comp HBR (File 188149) (Pass≥)	2.06 (0.081)		
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 x 10³ kPa	1.73	1.63	1.44
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.14	0.29	0.27
Outgassing, Water Vapor Regain (WVR) %		0.71	0.49	0.44
ENVIRONMENTAL				
Gasketing and Sealing	UL JMST2 (Consisting of UL50 & UL508)	-		
	CAN/CSA-C22.2 No. 94-M91	-		
Moisture Absorption, High Humidity Exposure, % Weight Gain, Typical	AMS 3568-95	2		
Water Absorption, Immersion Testing, % Weight Gain, Typical	ASTM D570-95	25	23	14
UV Resistance	ASTM G53-96	-		
Ozone Resistance	GM 4486P-95	-		
Corrosion Resistance	AMS 3568-91	-		
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 materials is supported by being directly cast onto 0.0508 mm (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 on the next page.

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)
Modules, MD, kPa (psi)	ASTM D882	3.5 x 10 ⁶ (5000,000)
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 $\geq 15.6\text{lb/ft}^3$ (250kg/m³) 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