

PORON[®]

Cellular Urethane Foams

Foot Pad Materials



**Ideal for
Many Applications**

Appliances

Calculators

Key Boards

Lap Top Computers

Personal Computers

Computer Accessories

Phone Battery Chargers

Printers

Stereos

VCRs

Wireless Phones

And More



PORON® microcellular urethane foam, with an open cell structure, is an excellent Foot Pad material. It is ideal for cushioning, vibration damping and shock isolation applications.

Excellent Grip

Foot Pads made of PORON urethane will not slide or skid when in contact with nearly any surface. PORON foam with a High Coefficient of Friction offers ideal skidproof protection.

High Energy Absorption

The excellent shock absorption and vibration damping qualities of PORON urethane Foot Pads will protect your product from damage.

Durability

PORON urethanes have an extremely low compression set. This means durability — adding to the life of your product. In addition PORON urethanes will not dry out and crack.

Bondability

PORON urethanes have very high bond strength, and can be bonded to a variety of surfaces. For even greater bond strength, various PET backed materials are also available.

Safe on Virtually Any Surface

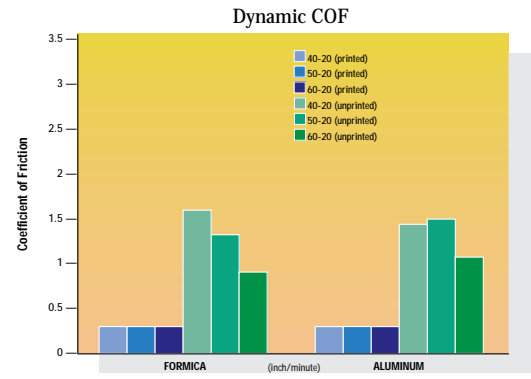
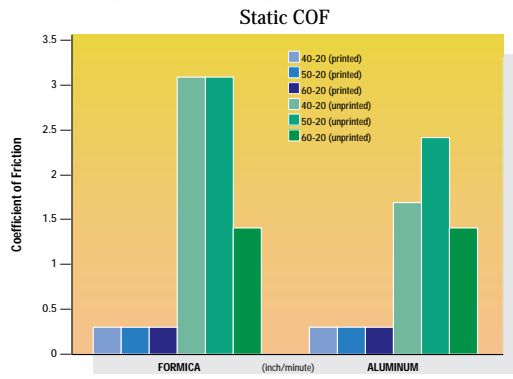
Because PORON urethanes do not have plasticizers to migrate, they will not mark contacted surfaces. PORON urethane is also resistant to a wide variety of chemicals.

PORON urethane foams are available in a variety of firmnesses and thicknesses to produce foot pads that are ideal for many types of applications in communications, electronics, office equipment, audio visual components and any type of environment where cushioning, energy absorption or sound damping is required.

Material Properties — PORON 4701

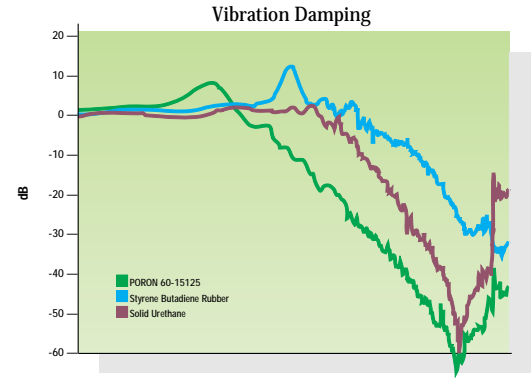
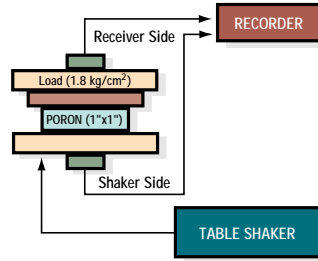
Coefficient of Friction

Test Method:
ASTM D 1894



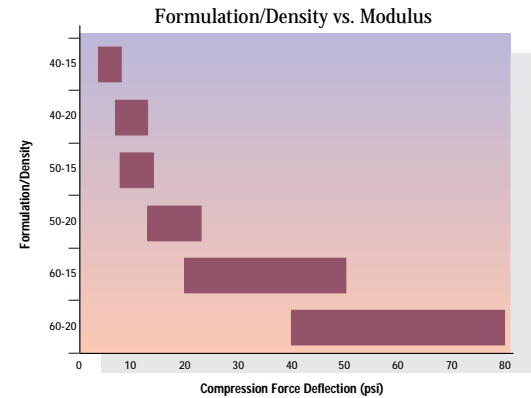
Vibration Damping

Test Method:
1" x 1" square samples subjected to 1.8 kg/cm² loading
Input: 0.001 G²Hz, 5Hz-2000Hz



Compression Force Deflection

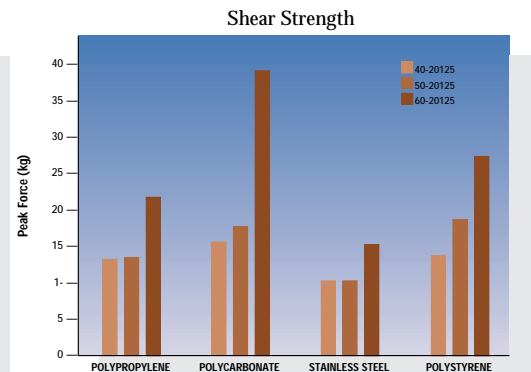
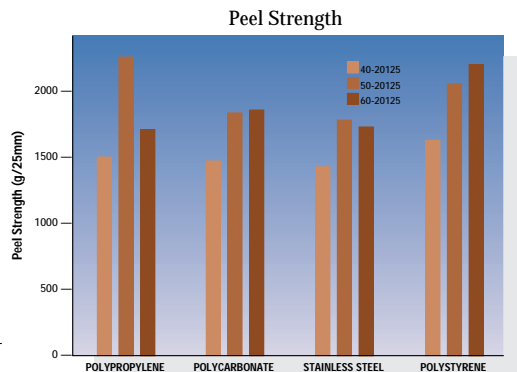
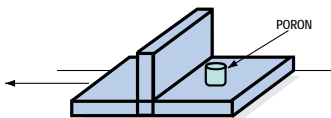
Test Method:
0.2"/min. Strain Rate Force measured
@ 25% deflection.



Bondability

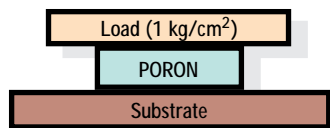
Test Method: Peel Strength
TMI Release & Adhesion Tester
Sample size: 1/2" wide strips
24 hr. dwell time, 180°C peel angle, 12"/min.
Sample size: 1/2" wide strips

Test Method: Shear Strength
5/8" disc, 200 mm/min.



Contamination

Test Method:
Samples: PORON 4701-40, -50 & -60
Load: 3" disc subjected to 1 kg/cm



CONTACT MATERIALS	TEST RESULT
Copper
Formica
Glass
Polycarbonate
Polypropylene
Polystyrene
Stainless Steel
Wood

No Signs Of Contamination

Typical Physical Properties

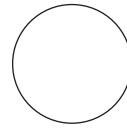
Property	Test Method	PORON® Cellular Urethane Material										
		4701-40			4701-50			4701-60				
Density, lb./ft ³ (kg/m ³) Tolerance	ASTM D3574 Test A	15 (240)	20 (320)	±10	15 (240)	20 (320)	30 (480)	±10	15 (240)	20 (320)	25 (400)	±10
PHYSICAL												
Standard Color, (Code) Special Colors Available		Black (04)			Black (04)			Black (04)				
Compression Set, % max.	ASTMD3574 Test D @ 73°F (23°C)	2			2			10				
Compression Force Deflection: psi (kPa)	0.2"/min. Strain Rate Force Measured @ 25% Deflection	4-8 (27-55)	7-13 (48-90)		8-14 (55-97)	13-23 (90-159)	30-60 (207-415)		15-45 (104-311)	35-85 (242-587)	45-125 (311-864)	
Dimensional Stability, %, max. change	22 Hrs. @ 176°F (80°C) in a forced air oven	±2.5			±2.5			±5				
Flammability	UL 94HBF	Pass	Pass		Pass	Pass	Pass≥ 0.031"		Pass	Pass≥ 0.062"	-	
Hardness, Durometer	Shore "O"	12	17		18	24	55		42	55	63	
Outgassing, Total Mass Loss TML %	ASTM E595 24 Hrs. @ 257°F (125°C) @ < 7 x 10 ⁻³ Pa	0.7	0.8		0.6	0.8	0.9		0.6	0.7	0.7	
Collected Volatile Condensable Materials (CVCM), %		0.04	0.04		0.04	0.05	0.06		0.05	0.02	0.03	
Water Vapor Regain (WVR), %		0.3	0.3		0.1	0.3	0.4		0.5	0.5	0.6	
Tear Strength, pli, min. (kN/m)	ASTM D624 Die C	3 (0.5)	5 (0.9)		6 (1.1)	10 (1.8)	13 (2.3)		14 (2.4)	18 (3.1)	25 (4.3)	
Tensile Elongation, %, min.	ASTM D357 Test E	100			90			40				
Tensile Strength, psi, min. (kPa)	ASTM D357 Test E	40 (276)	75 (518)		80 (553)	120 (829)	200 (1382)		130 (898)	200 (1382)	200 (1382)	
Temperature Resistance		Pass			Pass			Pass				
Cold Flexibility	MIL-P-12420C @ -40°F (-40°C)	-40°F (-40°C)			-40°F (-40°C)			-3°F (-16°C)				
Embrittlement	ASTM D746	158°F (70°C)			158°F (70°C)			158°F (70°C)				
Recommended Constant Use, max.		250°F (121°C)			250°F (121°C)			250°F (121°C)				
Recommended Intermittent Use, max.												
Surface Resistivity, ohm/sq.	ASTM D257	2 x 10 ¹²			7 x 10 ¹²			3 x 10 ¹²				
Volume Resistivity, ohm/cm	ASTM D257	1 x 10 ¹²			2 x 10 ¹²			7 x 10 ¹²				
Dielectric Constant, K' ("DK")	ASTM D150 measurements @ 72°F (22°C) relative humidity 50% for 24 Hrs.	1.71			1.63			1.60				
Dissipation Factor, tan D ("DF")	ASTM D150	0.05			0.05			0.05				
Dielectric Strength, volts/mil	ASTM D149	50			50			50				
Corrosion Resistance	AMS 3568	Pass			Pass			-				
Mildew/Bacteria Resistance	ASTM G21-96	Good			Good			Good				
Ozone Resistance	GM 4486P	Pass			Pass			Pass				
Skin Contact	Schwartz and Peck Human Patch Test	No Irritation			No Irritation			No Irritation				
Staining	ASTM D925-88	No Stain			No Stain			No Stain				
UV Resistance	AMS G53	Good			Good			Good				
Water Absorption, % weight gain, typical	AMS 3568	2			2			2				
Immersion Testing, % weight gain typical	ASTM 570	19	10		13	8	5		19	20	6	
Static Solvent Resistance	Specimens immersed for 10 min. in 75% Naptha, 25% 1, 1, 1-trichloroethane, then allowed to dry completely.	No tackiness or surface deterioration.			No tackiness or surface deterioration.			No tackiness or surface deterioration.				
Additional Solvent Resistance	• Antifreeze & Water 50/50 • Windshield Washer Solution • Electrical Grease • Soap & Water 50/50	No tackiness or surface deterioration.			No tackiness or surface deterioration.			No tackiness or surface deterioration.				

The above represents typical and preliminary values. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. The relative merits of materials for a specific application should be determined by your evaluation.

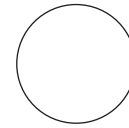


PORON 4701-40

- Low modulus, soft, suitable for shock absorbing applications.
- High coefficient of friction available.



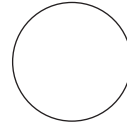
15 PCF



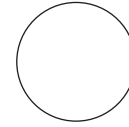
20 PCF

PORON 4701-50

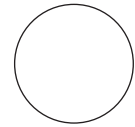
- High modulus grade, firm, suitable for standard foot pad applications.
- High coefficient of friction available.



15 PCF



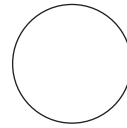
20 PCF



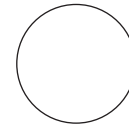
30 PCF

PORON 4701-60

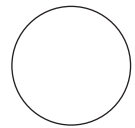
- Very high modulus grade.
- Very firm, will not collapse under heavy load.



15 PCF



20 PCF



25 PCF

Product Availability

	PORON Urethane Formulation								
	4701-40 (Soft)		4701-50 (Firm)			4701-60 (Very Firm)			
Standard Color	Black (04)		Black (04)			Black (04)			
Density	15 PCF	20 PCF	15 PCF	20 PCF	30 PCF	15 PCF	20 PCF	25 PCF	
Tolerance, %	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	
Thickness: 1/32" (0.031") 0,79 mm					●		●	●	
Thickness: 3/64" (0.045") 1,14 mm					●		◆	◆	
Thickness: 1/16" (0.062") 1,57 mm		●		●	◆	●	●	◆	
Thickness: 1/8" (0.125") 3,18 mm	◆	●	◆	●		●	●		
Thickness: 1/4" (0.250") 6,35 mm	●	◆	●	◆		●	◆		

* Please ask about additional formulations, colors, and thicknesses.

- **Standard Product**
- ◆ **Non-Standard Product**

PORON industrial materials are produced on a “make to order” basis. Although off-the-shelf stock may be available for standard grades and thicknesses, normal lead time is three weeks. Check with your Customer Service Representative for your specific requirements.

ROGERS

SINCE 1832

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