



PORON® Urethane Foams



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800-773-0062
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Material Selection Guide





Markets

Communications

Computers

Transportation

Electronics

Appliances

Medical Devices

Industrial



Applications

LCD Gaskets

Battery Pressure Pads

Speaker Gaskets

Environmental Seals

Spacers

Motor Mounts

Vibration Isolation Gaskets

Springs

Instrument Cluster Gaskets

Cup Holders Tabs

Air Filter Gaskets

Appliance Foot Pads

EMI/RFI Shielding



The world runs better with Rogers.®

PORON® Microcellular Urethane foams offer a broad range of design solutions for gasketing, sealing and energy absorption. PORON materials are part of the Rogers High Performance Foams family of products, which also include BISCO® Silicones.

Excellent Compression-set Resistance

Durable, long-term performance for gasketing, sealing, and cushioning

Energy Absorption

High resiliency, good vibration isolation and impact attenuation

Low Outgassing

No plasticizers to migrate, non-corrosive to metal, environmentally safe and clean

Broad Temperature Range

Excellent performance from -40°C to 90°C

Flame Retardant

Many of the materials meet flammability requirements of UL HBF and MVSS 302

Good Chemical Resistance

Information is available on material exposure to acids, bases, organic fluids and automotive & household fluids

Easy to Fabricate

Die-cuts cleanly and readily accepts adhesive without surface preparation

Product Consistency

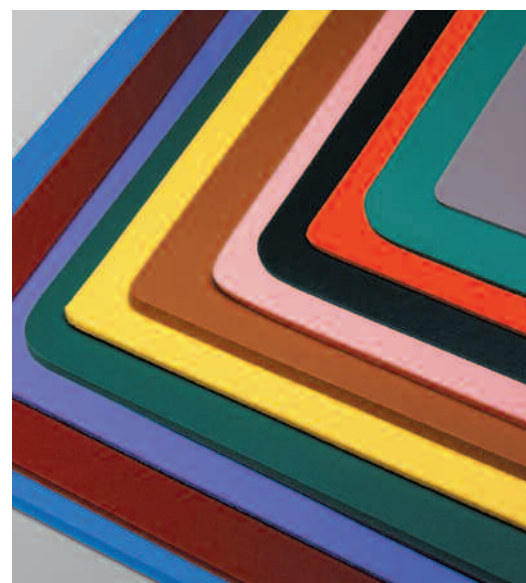
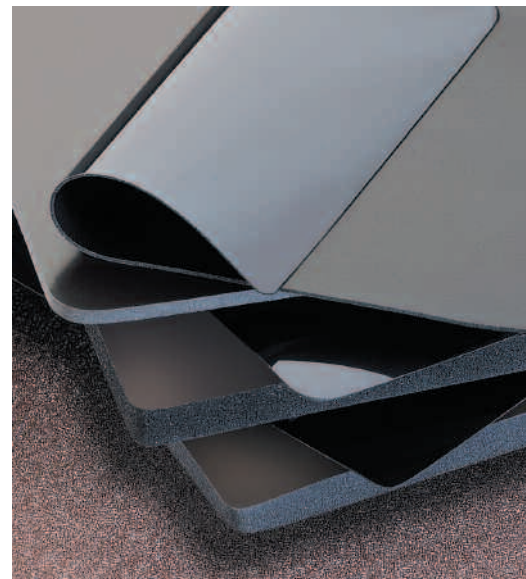
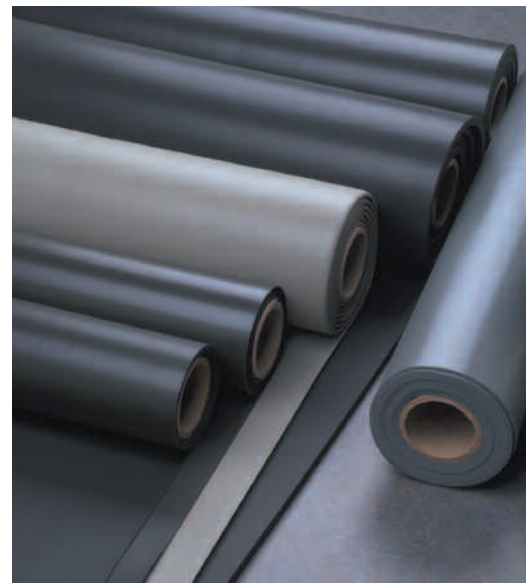
Quality manufacturing, material cast to tight tolerances and precise variations of density

Broad Product Offering

Wide range of firmness, density, thickness, and color options available

Quality Service

All products are supported by knowledgeable Rogers Sales Engineers, Technical Service, and Customer Service Representatives



Typical Physical Properties										Electrical & Thermal						
Density, lb./ft ³ (kg./m ³), Tolerance, % ASTM D 3574-95 Test A	Compression Force Deflection, Range psi (kPa), Typical psi (kPa) @ 25% Deflection	Hardness, Durometer, Shore "C", Shore "A", ASTM D 2240-97	Compression Set, % max, ASTM D 3574-95 Test D @ 73°F (23°C)	Compression Set, % max, Test J / Test D after autoclave 5 hrs. @ 158°F (70°C)	Dimensional Stability, % max, ASTM D 3574-95 22 hrs. @ 176°F (80°C) in a forced-air oven	Tensile Strength, Min. psi (kPa), Typical psi (kPa)	Tensile Elongation, %, Min., Typical	Tear Strength, Min. pli (kN/m), Typical pli (kN/m)	Dielectric Constant, K'(DK*), ASTM D 150-98 measurements @ 72°F (22°C) relative humidity 50% for 24 hours.	Dielectric Strength, volts/mil., ASTM D 149-97a	Dissipation Factor, tan D ("DF"), ASTM D 150-98	Volume Resistivity, ohm-cm, ASTM D 257-99	Surface Resistivity, ohm/sq., ASTM D 257-99	Thermal Conductivity, W/m-C, ASTM D 578-98	Coefficient of Thermal Expansion in /in./°C	
12 (192) ± 10	0.25-2.5 (1.7-17) 1.4 (10)	-	2	10	5 ± 3	12 (83)	150	2 (0.4)	-	42	-	-	-	2.3-3.1 x 10 ⁻⁴		
15 (240) ± 10	0.3-3.5 (2-24) 2 (14)	2	2	10	5 ± 5	15 (103) 30 (207)	120 206	4 (0.7) 5 (0.9)	1.48	50	0.04	8 x 10 ¹¹	10 x 10 ¹¹	0.083 (0.58)	2.8-3.1 x 10 ⁻⁴	
15 (240) ± 10	1-5 (7-35) 3 (21)	< 3	< 3			20 (138) 30 (207)	100 160	1 (0.2) 5 (0.9)								
20 (320) ± 10	3-8 (21-55) 5 (35)	8	2	10	5 ± 1	30 (207) 50 (346)	100 155	3 (0.5) 7 (1.2)	1.75	50	0.05	3 x 10 ¹¹	6 x 10 ¹¹	0.076 (0.53)	2.3-3.1 x 10 ⁻⁴	
25 (400) ± 10	5-12 (35-83) 9 (62)	16	12			35 (242) 70 (484)	100 150	4 (0.7) 10 (1.8)								
15 (240) ± 10	4-8 (27-55) 6 (41)	12	8			40 (276) 70 (484)	100 160	3 (0.5) 9 (1.6)								
20 (320) ± 10	7-13 (48-90) 11 (76)	17	12	5	10	5 ± 1	75 (518) 95 (657)	100 155	5 (0.9) 12 (2.1)	1.71	50	0.05	1 x 10 ¹²	2 x 10 ¹²	0.086 (0.60)	2.3-3.1 x 10 ⁻⁴
30* (480) ± 10	15-40 (104-276) 25 (173)	34	25			120 (829) 170 (1175)	100 145	12 (2.1) 17 (3.0)								
15 (240) ± 10	8-14 (55-97) 10 (69)	18	13			80 (553) 95 (657)	100 140	6 (1.1) 12 (2.1)								
20 (320) ± 10	13-23 (90-159) 17 (117)	24	18	5	10	5 ± 1	120 (829) 145 (1003)	100 135	10 (1.8) 16 (2.8)	1.63	50	0.05	2 x 10 ¹²	7 x 10 ¹²	0.090 (0.63)	2.3-3.1 x 10 ⁻⁴
30 (480) ± 10	30-60 (207-415) 39 (269)	55	42			200 (1382) 250 (1729)	90 130	13 (2.3) 24 (4.2)								
15 (240) ± 10	18-50 (124-345) 36 (249)	42	30			135 (931) 170 (1175)	50 75	12 (2.1) 19 (3.3)								
20 (320) ± 10	35-85 (241-586) 62 (428)	55	42	5	10	10 ± 5	200 (1382) 275 (1901)	45 75	17 (3.0) 25 (4.4)	1.60	50	0.05	7 x 10 ¹²	3 x 10 ¹²	0.088 (0.61)	2.3-3.1 x 10 ⁻⁴
25 (400) ± 10	50-130 (345-896) 93 (643)	63	53			250 (1724) 380 (2627)	50 75	19 (3.3) 30 (5.3)								

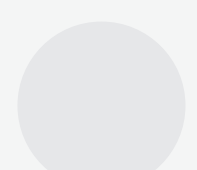
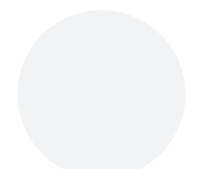
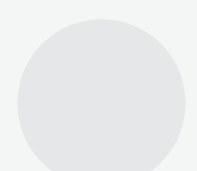
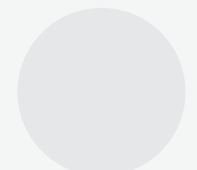
Testing Methods Appear in Green

Notes: All metric conversions are approximate. Additional technical services are available.
- Indicates data not available.

Temperature Resistance			Flammability & Outgassing				Environmental				Avail.						
Temperature Resistance, Constant Use, max., SAE J-2236	Temperature Resistance, Intermittent Use, max.	Temperature Resistance, Recommended MIL-P-12420 D 1991 @ -40 F (-40 C)	Flame Resistance, UL HB (File E20305) MVSS 302 (Pass, 2), CSA Component Acceptance HBF (File 188149) (Pass, ≥)	Fogging, SAE J-1756 3 hrs @ 212 F (100°C)	Outgassing, Total Mass Loss, (TML), % (C/M), % ASTM E 595 24 hrs @ 257 F (125°C) @ < 7x10 ⁻³ Pa	Outgassing, Collected Volatile Condensable Materials, ASTM E 595 24 hrs @ 257 F (125°C) @ < 7x10 ⁻³ Pa	Gasketing and Sealing, UL-JMIST2 (Consisting of UL50 and UL508), % weight gain, typical, AMS 3568P-95	Water Absorption, High Humidity Exposure, % weight gain, typical, AMS 3568P-95	UV Resistance, Immersion Testing, ASTM D 570-95	Ozone Resistance, ASTM G 53-96	Corrosion Resistance, GM 4486P-95	Thickness, inches (mm)	Standard Color (Code)	Tolerance, %			
194°F (90°C)	250°F (121°C)	-4°F (-20°C)	0.155 0.155	Pass	0.76	0.04	0.6	-	2	38	-	-	-	0.155-0.425 (3.94 - 10.8) ± 10%	Black (04)	4790-92 Extra Soft-Slow Rebound	
194°F (90°C)	250°F (121°C)	-4°F (-20°C)	0.118 0.118	Pass	1.73	0.14	0.71	File MH15464	2	34	-	-	-	0.125 - 0.500 (3.18 - 12.70) ± 10%	Black (04)	4701-30 Very Soft	
194°F (90°C)	250°F (121°C)	-60°F (-51°C)	Pass	0.093" 0.062" 0.093"	Pass	1	0.1	0.3	File MH15464 File 188149*	2	9	Good	Pass	Pass	0.188 - 0.500 (4.78 - 12.70) ± 10%	Black (04)	4701-40 Soft
194°F (90°C)	250°F (121°C)	-40°F (-40°C)	Pass	0.188" 0.188" 0.188"	Pass	0.7	0.04	0.3	File MH15464 File 188149	2	19	Good	Pass	Pass	0.188 - 0.500 (4.78 - 12.70) ± 10%	Black (04)	4701-50 Firm
194°F (90°C)	250°F (121°C)	-40°F (-40°C)	Pass	0.062" 0.062" 0.062"	Pass	0.8	0.05	0.3	File MH15464 File 188149**	2	8	Good	Pass	Pass	0.062 - 0.125 (1.57 - 3.18) ± 10%	Black (04)	4701-60 Very Firm
158°F (70°C)	250°F (121°C)	3°F (-16°C)	Pass	0.125" 0.125" 0.125"	Pass	0.6	0.05	0.5	File MH15464 File 188149	2	19	Good	Pass	-	0.125 - 0.250 (3.18 - 6.35) ± 10%	Black (04)	4701-60 Very Firm
				0.062" 0.062" 0.062"		0.7	0.02	0.5		6				0.031 - 0.188 (0.79 - 4.78) ± 10%			
				0.062" 0.062" 0.062"		0.7	0.03	0.6						0.031 - 0.093 (0.79 - 2.36) ± 15%			

Notes: Products exhibit good Mildew/Bacteria Resistance, ASTM G 21-96
Products exhibit no Skin Contact Irritation, Primary Skin Irritation Test (FHSA)
Products exhibit no Staining, ASTM D 925
*Material tested in Azure **Material tested in Gray

Unsupported Products



Typical Physical Properties										Electrical & Thermal						
Density, lb./ft. ³ (kg / m ³), ASTM D 3574-95 Test A	Compression Force Deflection, Flange psi (kPa), Typical psi (kPa), Measured @ 25% Deflection	Hardness, Durometer, Shore "O", ASTM D 2240-97	Compression Set, % max., ASTM D 3574-95 Test D @ 73°F (23°C)	Compression Set, % max., ASTM D 3574-95 Test J / Test D after autoclave @ 158°F (70°C)	Dimensional Stability, % max., ASTM D 3574-95 22 hrs. @ 176°F (80°C) in a forced-air oven	Tensile Strength, Min. psi (kPa), ASTM D 3574-95 Test E	Tensile Elongation, % Min., ASTM D 3574-95 Test E	Tear Strength, Min. pli (kN/m), ASTM D 642-91 Die C	Dielectric Constant, K' (DK), ASTM D 150 measurements @ 72°F (22°C) relative humidity 50% for 24 hours.	Dielectric Strength, volts/mil, ASTM D 149-97a	Dissipation Factor, tan D (DF), ASTM D 150-98	Volume Resistivity, ohm-cm, ASTM D 257-99	Surface Resistivity, ohm/sq., ASTM D 257-99	Thermal Conductivity, W/m-C (BTU-in/hr-ft ² -F), ASTM C 518-96	Coefficient of Thermal Expansion in./in./°C	
15 (240) ± 10	0.3-3.5 (2-24) 1.7 (12)	2	-	-	-	-	-	1.48	50	0.04	8 x 10 ¹¹	10 x 10 ¹¹	0.083 (0.58)	2.3-3.1 x 10 ⁻⁴		
20 (320) ± 10	1-5 (7-35) 3.2 (22)	2	10	-	-	-	-	1.48	50	0.04	8 x 10 ¹¹	10 x 10 ¹¹	0.083 (0.58)	2.3-3.1 x 10 ⁻⁴		
25 (400) ± 10	1.25-8.5 (8-58) 5.3 (37)	-	-	-	-	-	-	-	-	-	-	-	-	-		
20 (320) ± 10	3-8 (21-55) 5.0 (34)	8	-	-	-	-	-	1.75	50	0.05	3.1 x 10 ¹¹	5.9 x 10 ¹¹	0.076 (0.53)	2.3-3.1 x 10 ⁻⁴		
25 (400) ± 10	5-12 (35-83) 8.4 (58)	16	4	10	-	-	-	1.75	50	0.05	3.1 x 10 ¹¹	5.9 x 10 ¹¹	0.076 (0.53)	2.3-3.1 x 10 ⁻⁴		
30 (480) ± 10	15-45 (103-310) 32 (221)	55	5	10	-	-	-	1.63	50	0.05	2 x 10 ¹²	7 x 10 ¹²	0.090 (0.63)	2.3-3.1 x 10 ⁻⁴		
15 (240) ± 10	5-11 (35-76) 9.3 (64)	11	-	-	-	-	-	1.71	50	0.05	1 x 10 ¹²	2 x 10 ¹²	0.090 (0.63)	2.3-3.1 x 10 ⁻⁴		
20 (320) ± 10	10-17 (69-117) 15 (103)	19	5 ¹	10 ¹	5 ¹	±2	40 (276) 67 (462)	100 149	6 (1.1) 10 (1.8)	1.71	50	0.05	1 x 10 ¹²	2 x 10 ¹²	0.090 (0.63)	2.3-3.1 x 10 ⁻⁴
30 (480) ± 10	15-40 (103-276) 28 (193)	31	-	-	-	-	90 (620) 94 (648)	100 140	8 (1.4) 13 (2.3)	1.71	50	0.05	1 x 10 ¹²	2 x 10 ¹²	0.090 (0.63)	2.3-3.1 x 10 ⁻⁴
30 (480) ± 10	15-45 (103-310) 32 (221)	55	5	10	5	±1	120 (827) 149 (1027)	100 136	15 (2.6) 18 (3.2)	1.63	50	0.05	2 x 10 ¹²	7 x 10 ¹²	0.090 (0.63)	2.3-3.1 x 10 ⁻⁴
30 (480) ± 10	15-45 (103-310) 32 (221)	55	5	10	5	±1	160 (1106) 238 (1641)	90 118	9 (1.6) 25 (4.4)	1.63	50	0.05	2 x 10 ¹²	7 x 10 ¹²	0.090 (0.63)	2.3-3.1 x 10 ⁻⁴

Testing Methods Appear in Green

- Notes:** 1. Compression Set, % maximum, after 24 hour recovery
 2. PORON Microcellular Urethane material is supported by being directly cast onto 2 mil polyester film
 All metric conversions are approximate. Additional technical services are available. - Indicates data not available.

Temperature Resistance		Flammability & Outgassing			Environmental			Avail.		PET Film										
Temperature Resistance, Constant Use, max., SAE J-2236	Temperature Resistance, Intermittent Use, max.	Temperature Resistance, Recommended MIL-P-12420D	Flame Resistance, ASTM D 746-98	Smoke Resistance, UL HBF (File E20305) (Pass, ≥)	Outgassing, Total Mass Loss (TML), % ASTM E 595 24 hrs. @ 257°F (125°C) @ < 7x10⁻³ Pa	Outgassing, Collected Volatile Condensable Materials (CVCM), % ASTM E 595 24 hrs. @ 257°F (125°C) @ < 7x10⁻³ Pa	Water Vapor Regain (WVR), % UL50 and UL508	Water Absorption, High Humidity Exposure, typical, ASTM D 570-95	UV Resistance, ASTM G 53-96	Ozone Resistance, ASTM G 53-96	Corrosion Resistance, GM 4486P-95	Thickness, inches (mm), Tolerance, %	Standard Color (Code)	Density, g/cm ³ , ASTM D 1505	Tensile Strength MD, psi (kg/cm ²), ASTM D 882	Ultimate Elongation, ASTM D 882	Shrinkage MD, % (TD), 39 min. @ 150°C	Yield Strength (F5), psi (kg/cm ²), ASTM D 882	Coefficient of Friction A/B, (Kinetic), ASTM D 1894	
194°F (90°C)	250°F (121°C)	0°F (-18°C)	0.120	1.73	0.14	0.71	-	2	23	-	-	0.120 (3.05) ± 10%	Black (04)	1,395	30,000 (2,110)	150	12 (0.0)	15,000 (1,050)	0.40	
-	-	-	0.081	1.63	0.29	0.49	-	2	23	-	-	0.081 (2.06) ± 10%	Black (04)	1,395	30,000 (2,110)	150	12 (0.0)	15,000 (1,050)	0.40	
-	-	-	0.041	1.44	0.27	0.44	-	2	14	-	-	0.021 - 0.041 (0.53 - 1.04) ± 15%	Black (04)	1,395	30,000 (2,110)	150	12 (0.0)	15,000 (1,050)	0.40	
158°F (70°C)	250°F (121°C)	-60°F (-51°C)	-	1	0.1	0.3	File MH15464	2	9	Good	Pass	0.064 - 0.095 (1.63 - 2.36) ± 10%	Black (04)	1,395	30,000 (2,110)	150	12 (0.0)	15,000 (1,050)	0.40	
194°F (90°C)	250°F (121°C)	-40°F (-40°C)	Pass	1.3	0.2	0.6	File MH15464	2	14	Good	Pass	0.021 - 0.047 (0.53 - 1.19) ± 15%	Black (04)	1,395	30,000 (2,110)	150	12 (0.0)	15,000 (1,050)	0.40	
158°F (70°C)	250°F (121°C)	-40°F (-40°C)	Pass	0.9	0.06	0.43	File MH15464	2	5	Good	Pass	0.012 (0.30) ± 0.003in	Black (04)	1,395	30,000 (2,110)	150	12 (0.0)	15,000 (1,050)	0.40	
194°F (90°C)	250°F (121°C)	-	0.197*	0.84	0.05	0.4	File MH15464	3	19	-	-	0.188 - 0.500 (4.78 - 12.7) ± 10%	Black (04)	-	-	-	-	-	-	
194°F (90°C)	250°F (121°C)	-	-	0.97	0.04	0.46	File MH15464	3	9	-	-	0.062 - 0.125 (1.57 - 3.18) ± 10%	Black (04)	-	-	-	-	-	-	
-	-	-	-	1.0	0.06	0.65	File MH15464	3	7	-	-	0.031 - 0.045 (0.79 - 1.14) ± 20%	Black (04)	-	-	-	-	-	-	
194°F (90°C)	250°F (121°C)	-40°F (-40°C)	Pass	0.045*	0.9	0.06	0.43	File MH15464	2	5	Good	Pass	0.017 - 0.020 (0.43 - 0.50) ± 0.003in	Black (04)	-	-	-	-	-	-

Notes: Products exhibit good Mildew/Bacteria Resistance, ASTM G 21-96

- Products exhibit no Skin Contact Irritation, Primary Skin Irritation Test (FHSA)
 Products exhibit no Staining, ASTM D 925

Supported Products²

4790-92
Extra Soft-Slow Rebound

4701-30
Very Soft

4701-50
Firm

Additional Offerings

4701-41
Soft - Enhanced Sealability

4701-50
Firm-Thin as Cast

World Class Performance

Rogers Corporation (NYSE:ROG), headquartered in Rogers, CT, is a global technology leader in the development and manufacture of high performance, specialty-material-based products for a variety of applications in diverse markets including: portable communications, communications infrastructure, computer and office equipment, consumer products, ground transportation, aerospace and defense. In an ever-changing world, where product design and manufacturing often take place on different sides of the planet, Rogers has the global reach to meet customer needs. Rogers provides the convenience of a worldwide presence and a true understanding of global markets. The world runs better with Rogers.®

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The Woodstock, CT Facility
Is Registered to ISO 9001:2000
Certificate No. A-3843

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