ROGERS CORPORATION

PORON® Polyurethanes

Elastomeric Material Solutions
www.rogerscorp.com

Typical Product Properties

PORON® 4701-30 Very Soft

PROPERTY	TEST METHOD	VALUE		
PHYSICAL				
Density, kg /m^3 (lb / ft^3)	ASTM D 3574-95, Test A	240 (15)	320 (20)	400 (25)
Tolerance, %		**± 10**		
Thickness, mm (inches)		4,78 - 12,70 (0.188 - 0.500)	1.57 – 3.18 (0.062-0.125)	0,79 - 1,14 (0.031 - 0.045)
Tolerance, %		**± 10**		**± 15**
Standard Color (Code)		Black (04)		
Compression Force Deflection, kPa (psi) **Typical kPa (psi)**	.51cm/min (0.2" / min) Strain Rate Force Measured @ 25% Deflection	7 - 35 (1 – 5) **21 (3)**	21 - 55 (3 – 8) **35 (5)**	35 - 83 (5 – 12) **62 (9)**
Hardness, Durometer, Shore "O", **Shore "A"**	ASTM D 2240-97	<3 **<3**	8 **5**	16 **12**
Compression Set, % max.	ASTM D 1667-90 Test D @ 23°C (73°F) ASTM D 3574-95 Test D @ 70°C (158°F) ASTM D 3574-95 Test J/Test D autoclaved 5 hrs @ 121°C (250°F)	2 10 5		
Dimensional Stability, % max. change	22 hrs @ 80°C (176°F) in a forced-air oven	± 1		
Tensile Strength,. kPa (psi) min **Typical kPa (psi)**	ASTM D 3574-75 Test E	138 (20) **207 (30)**	207 (30) **346 (50)**	242 (35) **484 (70)**
Tensile Elongation, % min., **Typical**	ASTM D 3574-75 Test E	100 **160**	100 **155**	100 **150**
Tear Strength, kN/m (pli) min **Typical kN/m (pli)**	ASTM D 264-91 Die C	0.2 (1) **0.9 (5)**	0.5 (3) **1.2 (7)**	0.7 (4) **1.8 (10)**
ELECTRICAL AND THERMAL				
Dielectric Constant, K' ("DK")	ASTM D 150 measurements at 22°C (72°F) relative humidity 50% for 24 hrs.	1.75		
Dielectric Strength, kV/m (volts/mil)	ASTM D 149-97a	1969 (50)		
Dissipation Factor, tan D ("DF")	ASTM D 150-98	0.05		
Volume Resistivity, ohm-cm (ohm-in)	ASTM D 257-99	3 x 10^{11} (1.18 x 10^{11})		
Surface Resistivity, ohm/sq.	ASTM D 257-99	6 x 10^{11}		
Thermal Conductivity, W/m-C (BTU-in./hr/ft^2-F)	ASTM C 518-98	-	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)		

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PORON® 4701-30 Very Soft, continued

PROPERTY	TEST METHOD	VALUE		
Density, kg /m^3 (lb. / ft^3)	ASTM D 3574-95, Test A	240 (15)	320 (20)	400 (25)
TEMPERATURE RESISTANCE				
Recommended Constant Use, max.	SAE J-2236	90°C (194°F)		
Recommended Intermittent Use, max.		121°C (250°F)		
Embrittlement	ASTM D 746-98	-51°C (-60°F)		
Cold Flexibility	MIL-P-12420D 1991 @ -40°C (-40°F)	Pass		
FLAMMABILITY AND OUTGASSING				
Flammability	UL 94HBF (File E20305) (Pass ≥) MVSS 302 (Pass ≥) CSA Comp HBF (File 188149) (Pass ≥)	4.8mm (0.188″) 4.8mm (0.188″) 4.8mm (0.188″)	2.4mm (0.093″) 1.6mm (0.062″) 2.4mm (0.093″)	- 1.6mm (0.062″) -
Fogging	SAE J-1756 3 hrs @ 100°C (212°F)	Pass		
Outgassing, Total Mass Loss (TML) %	ASTM E 595-93 24 hrs @ 125°C (257°F) @ <7kPa (1.02 psi)	0.8	1.0	1.3
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.1	0.1	0.2
Outgassing, Water Vapor Regain (WVR) %		0.2	0.3	0.6
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 D 570-95	12	9	14
UV Resistance	ASTM G 53-96	Good		
Ozone Resistance	GM 4486P-95	Pass	Pass	-
Corrosion Resistance	AMS 3568-91	Pass		
Mildew/Bacteria Resistance	ASTM G 21	Good		
Staining	ASTM D 925	No Stain		

Notes:
1. – Represents testing not available at this time.
2. All metric conversions are approximate.
3. Additional technical information is available.
4. Typical values should not be used for specification limits.

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